Paul

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# SEARCH REQUEST FORM

## Scientific and Technical Information Center

Requester's full Name: Devesh Khare Examiner #: 77931 Date: 3/27/2003
Art Unit: 1623 Phone Number 605-1199 Serial Number: 09/828,276
Mail Box: CM1-8B19 and Bldg/Room Location: CM1-8A13 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be search Include the elected species or structures, key words, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: See Bib Data Sheet

Inventors (please provide full names): See Bib Data Sheet

Earliest priority Filing Date: See Bib Data Sheet

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please carry out a structure search for the compounds in claim 1 and 10 (claims 1-16) and their pharmaceutical compositions. A copy of the claims is provided.

The Bib Data Sheet which discloses the inventor names, title of the invention, and the earliest priority filing date is also provided.

Note: Please return the copy of the claims with the search.

Thank you.

POINT OF CONTACT:
PAUL SCHULWITZ
TECHNICAL INFO. SPECIALIST
CM1 6B06 TEL. (703) 305-1954

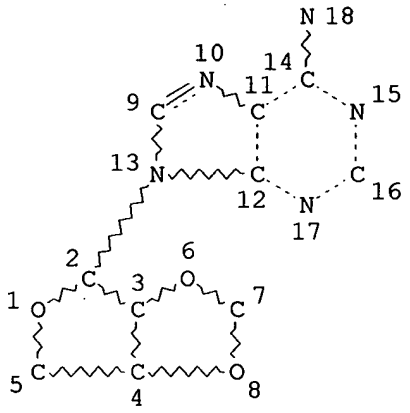


**********

| STAFF USE ONLY | Type of Search | Vendors and cost where applicable |
|---|---|---|
| Searcher: | NA Sequence (#) | STN 1241.40 |
| Searcher Phone #: | AA Sequence (#) | Dialog |
| Searcher Location: | Structure (#) 8 | Questel/Orbit |
| Date Searcher Picked Up: 3/28 | Bibliographic | Dr. Link |
| Date Completed: 4/3 | Litigation | Lexis/Nexis |
| Searcher Prep & Review Time: 60 | Fulltext | Sequence Systems |
| Clerical prep time: | Patent Family | WWW/Internet |
| Online Time: 82 | Other | Other (specify) |

PTO-1590 (1-2000)

=> d que
L1 STR

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
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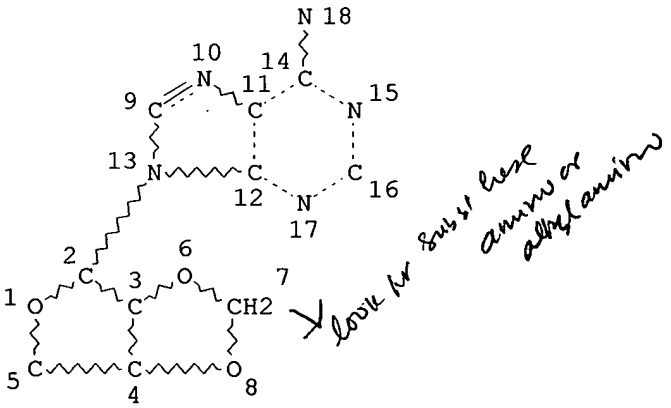


look for sulfur heteroatoms or alkylamines

NODE ATTRIBUTES:
NSPEC IS RC AT 18
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

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L4          15 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
L30         10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4


=> d ibib abs hitstr l30 1-10

L30  ANSWER 1 OF 10  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        1993:204739  HCAPLUS
DOCUMENT NUMBER:         118:204739
TITLE:                   2',3'-O-Cyclic derivatives of ribonucleosides and
                         their 5'-phosphonates:  synthesis and anti-HIV
                         activity
AUTHOR(S):               Atrazheva, E. D.; Lukin, M. A.; Yasko, M. V.;
                         Shushkov, T. V.; Tarussova, N. B.; Kraevskii, A.;
                         Balzarini, Jan; De Clercq, Erik
CORPORATE SOURCE:        V. A. Engel'khardt Inst. Mol. Biol., Moscow, 117984,
                         Russia
SOURCE:                  Medicinal Chemistry Research (1991), 1(2), 155-65
                         CODEN: MCREEB; ISSN: 1054-2523
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   Several 2',3'-O-orthoesters, 2',3'-O-ketals and 2',3'-O-acetals of
     ribonucleosides and their 5'-phosphonates were synthesized.  In come cases
     urine diastereomers were either isolated from the racemate mixts. or
     stereospecifically synthesized.  Some nucleosides and their
     5'-phosphonates were effective in suppressing HIV-1 replication in MT-4
     cells.  Of the nucleosides, 2',3'-O-methoxymethyleneguanosine (both R and
     S diastereomers) and 2',3'-O-methoxymethylenecytidine showed some anti-HIV
     activity.  However, a more pronounced anti-HIV activity, with selectivity
     indexes of 2-3 orders of magnitude, was exhibited by the
     5'-hydrogenphosphonates of 2',3'-O-methoxymethyleneadenosine (R
     diastereomer), 2',3'-O-methoxymethylenecytidine, 2',3'-O-
     methoxymethyleneguanosine as well as 2',3'-O-ethoxymethyleneadenosine
     5'-hydroxymethylphosphonate (R diastereomer).
IT   4137-31-9P 143992-71-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of and human immunodeficiency virus inhibition by)
RN   4137-31-9  HCAPLUS
CN   Adenosine, 2',3'-O-methylene- (7CI, 8CI, 9CI)  (CA INDEX NAME)

Absolute stereochemistry.
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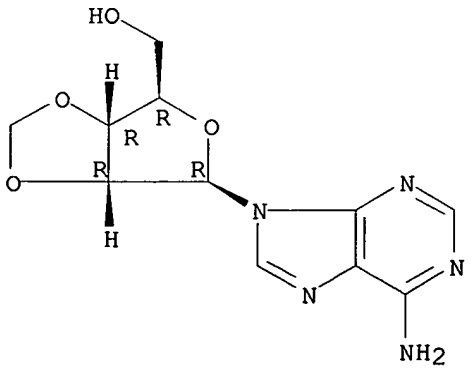
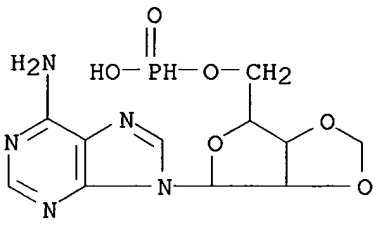
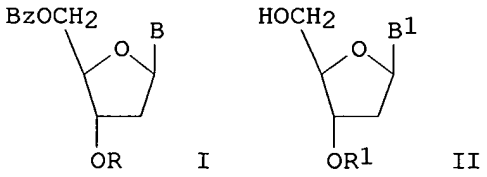


RN 143992-71-6 HCAPLUS
CN Adenosine, 2',3'-O-methylene-, 5'-(hydrogen phosphonate) (9CI) (CA INDEX NAME)

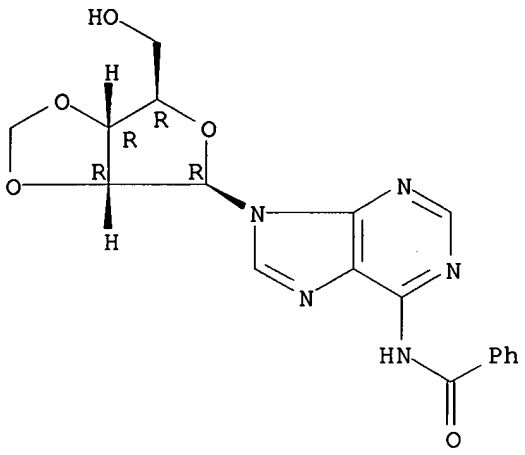


L30 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:427016 HCAPLUS
DOCUMENT NUMBER: 117:27016
TITLE: 1-Alkylthioalkylation of nucleoside hydroxyl functions and its synthetic applications: a new versatile method in nucleoside chemistry
AUTHOR(S): Zavgorodnii, S.; Polyanskii, M.; Besidskii, E.; Kryukov, V.; Sanin, A.; Pokrovakaya, M.; Gurskaya, G.; Lonnberg, Harri; Azhaev, A.
CORPORATE SOURCE: Chimtech Ltd., Moscow, 117871, USSR
SOURCE: Tetrahedron Letters (1991), 32(51), 7593-6
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



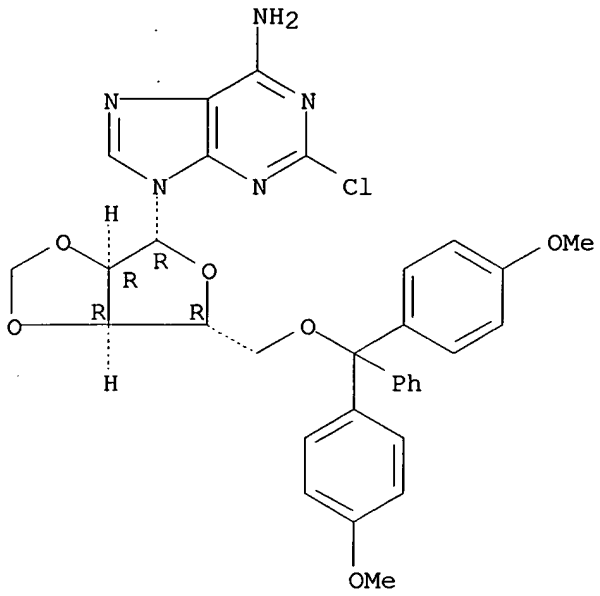
AB Treatment of appropriately protected nucleosides I (B = Thy, BzCyt, BzAde, IbGua; R = H) with a mixt. of acetic acid, acetic anhydride and dialkyl sulfoxide was shown to give O-(1-alkylthioalkylated) nucleosides I (R = CH2SMe) that were oxidized to the corresponding sulfoxides and sulfones I [R = CH2S(O)nMe, n = 1, 2], or converted via O-halomethyl derivs. I (R = CH2Br, CH2Cl) to various O-substituted nucleosides, e.g., II, [B1 = Thy, Cyt, Ade, Gua; R1 = CH2F, CH2N3, CH2CN, CH2OMe, CH2P(O)(OH)2].
IT **139434-75-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 139434-75-6 HCAPLUS
CN Adenosine, N-benzoyl-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



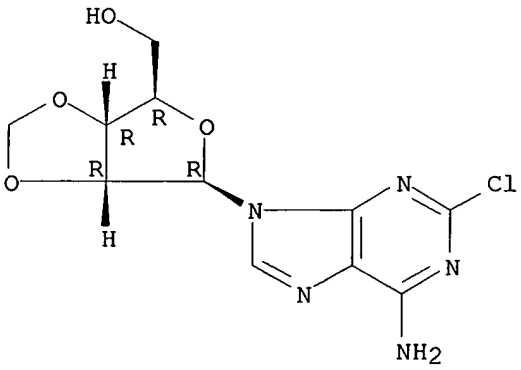
L30 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:441207 HCAPLUS
DOCUMENT NUMBER: 113:41207
TITLE: Synthesis of the 2-chloro analogs of 3'-deoxyadenosine, 2',3'-dideoxyadenosine, and 2',3'-didehydro-2',3'-dideoxyadenosine as potential antiviral agents [Erratum to document cited in CA110(21):193310x]
AUTHOR(S): Rosowsky, Andre; Solan, Vishnu C.; Sodroski, Joseph G.; Ruprecht, Ruth M.
CORPORATE SOURCE: Dana-Farber Cancer Inst., Harvard Med. Sch., Boston, MA, 02115, USA
SOURCE: Journal of Medicinal Chemistry (1990), 33(4), 1270
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Errors in the text have been cor. The errors were not reflected in the abstr. or the index entries.
IT **119530-61-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and detritylation of (Erratum))
RN 119530-61-9 HCAPLUS
CN Adenosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2-chloro-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



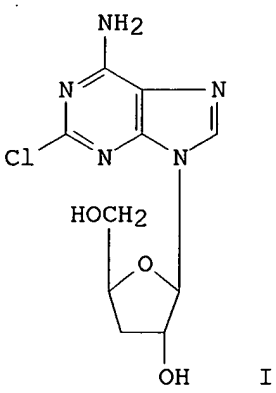

IT **119530-63-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of (Erratum))
RN 119530-63-1 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L30 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:193310 HCAPLUS
DOCUMENT NUMBER: 110:193310
TITLE: Synthesis of the 2-chloro analogs of 3'-deoxyadenosine, 2',3'-dideoxyadenosine, and 2',3'-didehydro-2',3'-dideoxyadenosine as potential antiviral agents
AUTHOR(S): Rosowsky, Andre; Solan, Vishnu C.; Sodroski, Joseph G.; Ruprecht, Ruth M.
CORPORATE SOURCE: Dana-Farber Cancer Inst., Harvard Med. Sch., Boston,

MA, 02115, USA
SOURCE: Journal of Medicinal Chemistry (1989), 32(5), 1135-40
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:193310
GI



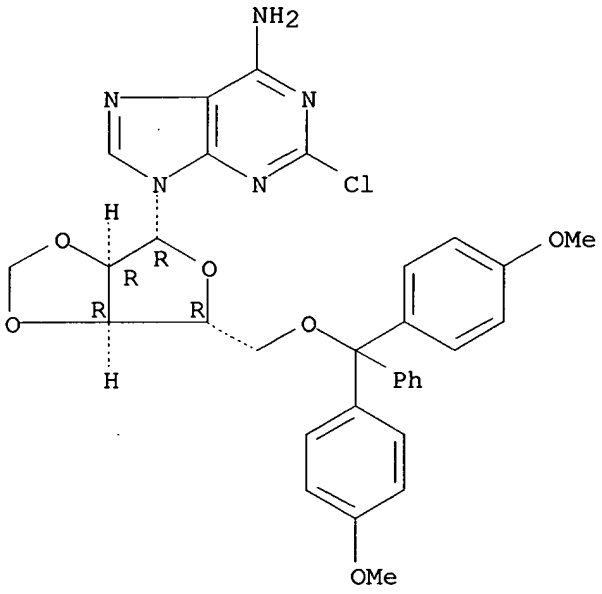
I

AB 2-Chloro-3'-deoxyadenosine (I), 2-chloro-2',3'-dideoxyadenosine (II), and 2-chloro-2',3'-didehydro-2',3'-dideoxyadenosine (III) were synthesized from 2-chloroadenosine as candidate antiretroviral agents on the basis that 2-chloro substitution would prevent enzymic deamination and increase efficacy relative to 2',3'-dideoxyadenosine. Redn. of 2-chloro-5'-O-(4,4'-dimethoxytrityl)-2',3'-O-thiocarbonyladenosine (IV) with Bu3SnH, followed by detritylation with AcOH, unexpectedly gave a mixt. of I and 2-chloroadenine. Treatment of the crude Bu3SnH redn. product with 1,1'-thiocarbonyldiimidazole, followed by another cycle of Bu3SnH redn. and detritylation with silica gel afforded II and a byproduct identified as 2-chloro-2',3'-O-methyleneadenosine. Treatment of IV with 1,3-dimethyl-2-phenyl-1,3,2-diazaphospholidine followed by silica gel detritylation afforded III. II and III were tested for activity against human immunodeficiency virus (HIV) in a cultured human T4+ lymphocyte cell line. At a concn. of 100 .mu.M, II inhibited reverse transcriptase (RT) prodn. by 97%, while 2',3'-dideoxyadenosine (V) gave >99% inhibition. In growth assays against uninfected T4+ cells, however, 100 .mu.M II gave 23% inhibition while 100 .mu.M V was nontoxic. At a nontoxic concn. of 20 .mu.M, RT prodn. was 75% inhibited by V but only 43% inhibited by II. Thus, a 2-chloro substituent increased host cell toxicity but decreased antiretroviral activity. III was more cytotoxic than II, and antiviral effects could not be measured above 20 .mu.M, where there was only 75% inhibition of RT prodn. Because of the decreased therapeutic index of III relative to II and V, >90% inhibition of viral protein synthesis at a noncytotoxic concn. could not be achieved. In growth assays with cultured human T and B lymphocytes, 100 .mu.M I gave 60-70% growth inhibition, while the IC50 against mouse fibroblasts was only 30 .mu.M. The high cytotoxicity of I precluded consideration of this compd. as an antiviral agent.

IT **119530-61-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

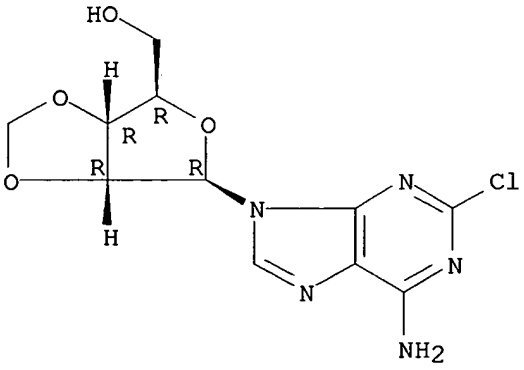
(prepn. and detritylation of)
RN 119530-61-9 HCAPLUS
CN Adenosine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2-chloro-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **119530-63-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 119530-63-1 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L30 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:472985 HCAPLUS
DOCUMENT NUMBER: 107:72985

TITLE: A proton magnetic resonance study of the effects of polyamine and divalent metal ions on diadenosine 5', 5'''-P1,P4-tetraphosphate base stacking
AUTHOR(S): Westkaemper, Richard B.
CORPORATE SOURCE: Sch. Pharm., Virginia Commonwealth Univ., Richmond, VA, 23298, USA
SOURCE: Biochemical and Biophysical Research Communications (1987), 144(2), 922-9
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: English

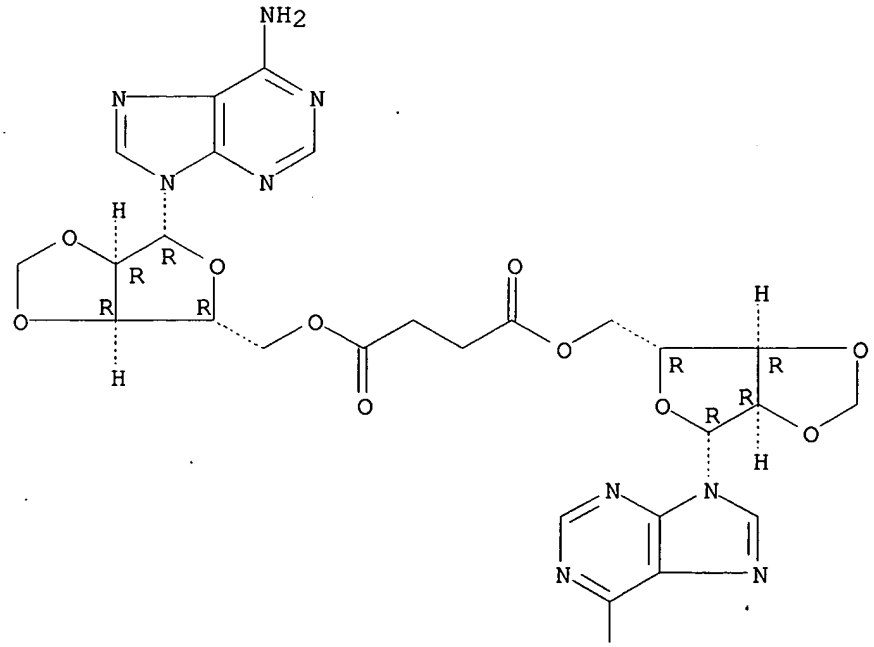
AB Complexation of putrescine, spermidine, spermine, and Mg2+ with diadenosine 5', 5'''-P1, P4-tetraphosphate induces an upfield shift in the NMR signals for the H-2 and H-8 protons. The upfield shifts in H-2 indicate that cation complexation enhances intramol. adenine stacking interactions. The resonances for H-2 and H-8 of neutral analogs of 5',5'-dinucleotides appear farther upfield relative to the appropriate monomeric models than those for the corresponding dinucleotide; redn. of intra-chain phosphate repulsion is the origin of cation induced enhancement of diadenosine 5',5'''-P1,P4-tetraphosphate base stacking.

IT **109828-20-8P 109828-21-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)

RN 109828-20-8 HCAPLUS
CN Adenosine, 2',3'-O-methylene-, 5',5'''-butanedioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

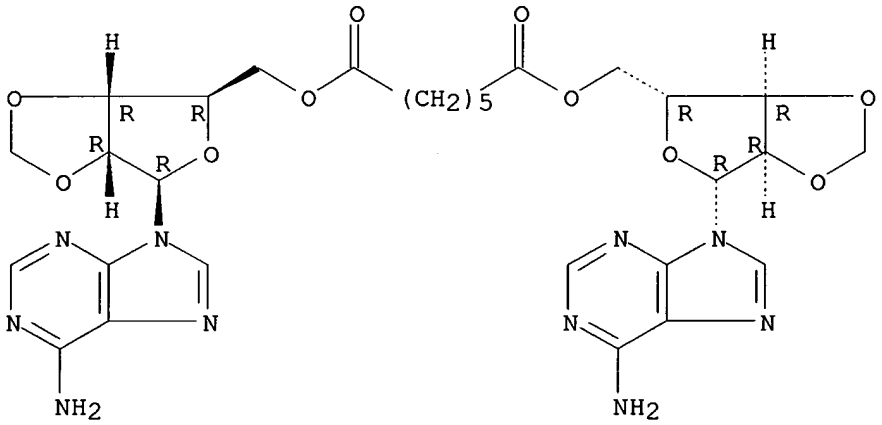
PAGE 1-A



PAGE 2-A

RN 109828-21-9 HCAPLUS
CN Adenosine, 2',3'-O-methylene-, 5',5'''-heptanedioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L30 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:551228 HCAPLUS
DOCUMENT NUMBER: 105:151228
TITLE: Biological activity of new 2-5A analogs
AUTHOR(S): Pauwels, R.; De Clercq, E.; Balzarini, J.; Sawai, H.; Imbach, J. L.; Gosselin, G.; Huss, S.; Reese, C. B.; Serafinowska, H.; et al.
CORPORATE SOURCE: Rega Inst. Med. Res., Univ. Leuven, Louvain, B-3000, Belg.
SOURCE: Chemica Scripta (1986), 26(1), 141-5
CODEN: CSRPB9; ISSN: 0004-2056
DOCUMENT TYPE: Journal
LANGUAGE: English

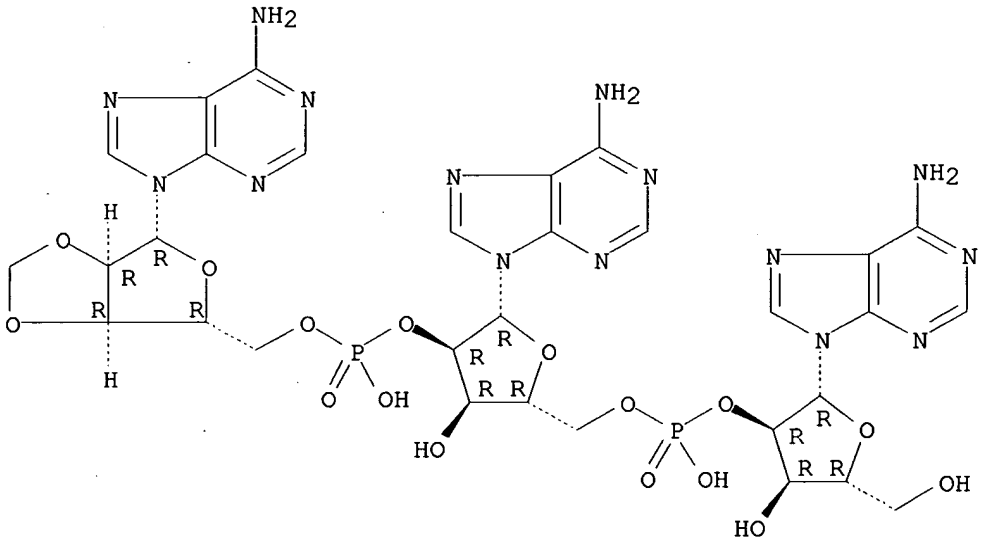
AB Of a series of newly synthesized 2'-5' oligoadenylate (2-5A) analogs (with modifications in the ribose-phosphate backbone), several compds. proved effective as antimitogenic and antiproliferative agents. The antimitogenic activity was based upon the inhibition of DNA and protein synthesis in synchronized (serum-starved) Balb/c 3T3 cells, whereas the antiproliferative activity was detd. by monitoring the inhibition of murine leukemia L1210 cell growth. The antiproliferative effects of 2-5 A analogs correlated closely with their inhibitory effects on DNA and protein synthesis. When considered on a monomer equiv. basis, the mixed adenosine-cordycepin (1:2) cotrimer was more active than the cordycepin monomer, the phosphoramidate-linked adenosine trimer was less active than the aminoadenosine monomer, whereas the aristeromycin trimer, the xyloadenosine tri- and tetramers and the mixed adenosine-xyloadenosine (1:2, 2:1, 2:2, 1:3) tri- or tetramers were about equally active as either

the aristeromycin or xyloadenosine monomer. It is likely that the latter 2-5A analogs owe their biol. activity to degrdn. to their monomer units.

IT **85818-47-9 103998-32-9**
RL: BIOL (Biological study)
(DNA and protein synthesis response to)

RN 85818-47-9 HCAPLUS
CN Adenosine, adenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-2',3'-O-methylene- (9CI) (CA INDEX NAME)

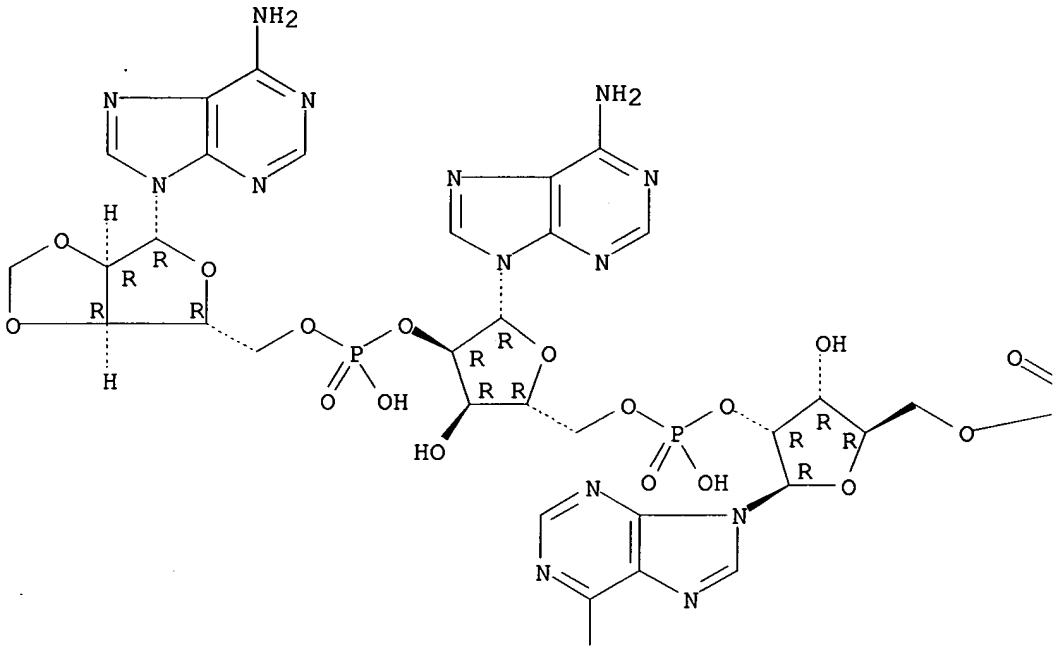
Absolute stereochemistry.



RN 103998-32-9 HCAPLUS
CN Adenosine, adenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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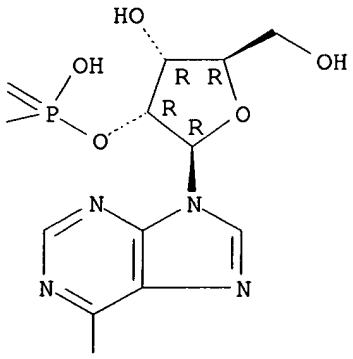

PAGE 2-A

PAGE 2-B

L30 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:130202 HCAPLUS
DOCUMENT NUMBER: 104:130202
TITLE: 2',3'-O-Methylene derivatives of ribonucleosides
AUTHOR(S): Norman, David G.; Reese, Colin B.; Serafinowska, Halina T.
CORPORATE SOURCE: Dep. Chem., King's Coll., Strand/London, WC2R 2LS, UK
SOURCE: Synthesis (1985), (8), 751-4
CODEN: SYNTBF; ISSN: 0039-7881
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 104:130202
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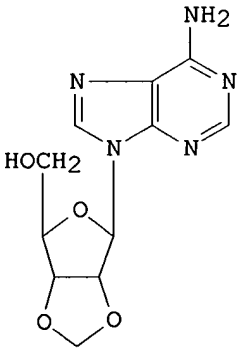


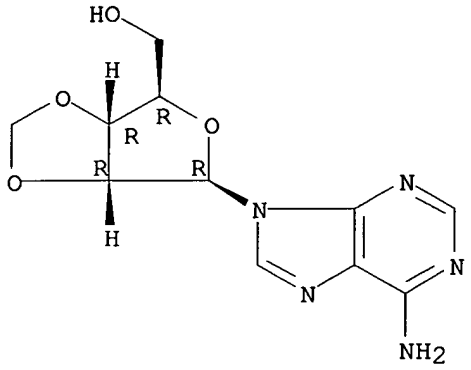
II

AB 5'-O,N6-Ditrityladenosine (I), prepd. from adenosine, was refluxed with CH2Br2, NaOH, CH2Cl2, H2O, and cetyltrimethylammonium bromide and the product was detritylated with AcOH-H2O at reflux to give methyleneadenosine II (yield 50% based on I). Analogous methylenation of 5'-O-trityluridine gave 2',3'-O-methylene-5'-O-trityluridine (III) which was detritylated to give 2',3'-O-methyleneuridine. Also prepd. was N4-benzoyl-2',3'-O-methylenecytidine from III.

IT **4137-31-9P 101072-38-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and tritylation of)

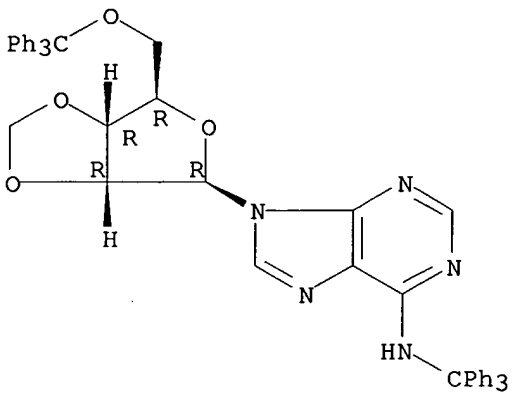
RN 4137-31-9 HCAPLUS
CN Adenosine, 2',3'-O-methylene- (7CI, 8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 101072-38-2 HCAPLUS
CN Adenosine, 2',3'-O-methylene-N-(triphenylmethyl)-5'-O-(triphenylmethyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L30 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1983:213907 HCAPLUS
DOCUMENT NUMBER: 98:213907
TITLE: Analogs and analog inhibitors of ppp(A2'p)nA. Their stability and biological activity
AUTHOR(S): Haugh, Margaret C.; Cayley, P. Jane; Serafinowska, Halina T.; Norman, David G.; Reese, Colin B.; Kerr, Ian M.
CORPORATE SOURCE: Imp. Cancer Res. Fund Lab., London, UK
SOURCE: European Journal of Biochemistry (1983), 132(1), 77-84
CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Higher oligomers of ppp(A2'p)nA (n = 2-6) together with (A2'p)nA,

(A2'p)2A3'OCH3, (A2'p)2A2',3'CH2, (A2'p)2dA, dA2'p)2dA, their 5'-monophosphates and diphosphates and 5'-S-methylphosphorothioates have been investigated for relative stability and biol. activity in mouse and human cells and mouse, human, and rabbit cell-free systems. The oligomers from trimer to heptamer inhibited protein and DNA synthesis when introduced into intact mouse cells and activated the ppp(A2'p)nA-dependent RNase at below nanomolar concns. in mouse cell exts. The 5'-diphosphates pp(A2'p)2A and corresponding analogs were active both in cell-free systems and on introduction into intact cells. The exception to this was the all 3'-deoxyadenosine analog pp(dA2'p)2dA which failed to activate the ppp(A2'p)nA-dependent nuclease in the mouse L and human (Daudi and HeLa) cell exts. tested. Of the active analogs the 3'-OCH3 appeared to be the most stable in the cells and systems employed. On the other hand the non-phosphorylated 'core' (A2'p)2A and its 3'-substituted analogs were inactive in mouse L and Ehrlich ascites tumor cell-free systems and had no effect on intact (nonpermeabilized) 3T3 cells. In intact mouse L cells or exts. from interferon-treated human (Daudi) cells, the 5'-monophosphate, p(A2'p)2A mimicked the action of ppp(A2'p)2A, possibly through conversion to the 5'-diphosphate or 5'-triphosphate. The 5'-S-methylphosphorothioate derivs. of the 3'-substituted analogs are both more stable to exonucleolytic cleavage and unlikely to be converted to the 5'-diphosphates or 5'-triphosphates. They are analog inhibitors of ppp(A2'p)nA in mouse L cell exts. How widely they will be effective in a variety of cell-free systems and intact cells remains to be established. The 5'-diphosphate pp(A2'p)2A and corresponding analogs were not equally active, nor was the 5'-S-methylphosphorothioate [CH3Sp(A2'p)2A2',3'CH2] equally effective as an analog inhibitor, in different cell-free systems. This emphasizes the apparent differences in the properties of the ppp(A2'p)nA-dependent RNases from different sources. Accordingly, in looking for a generally effective analog inhibitor of ppp(A2'p)2A its activity in a variety of exts. should be tested, and in any search for further analogs for potential clin. use, human cells and exts. should be employed.

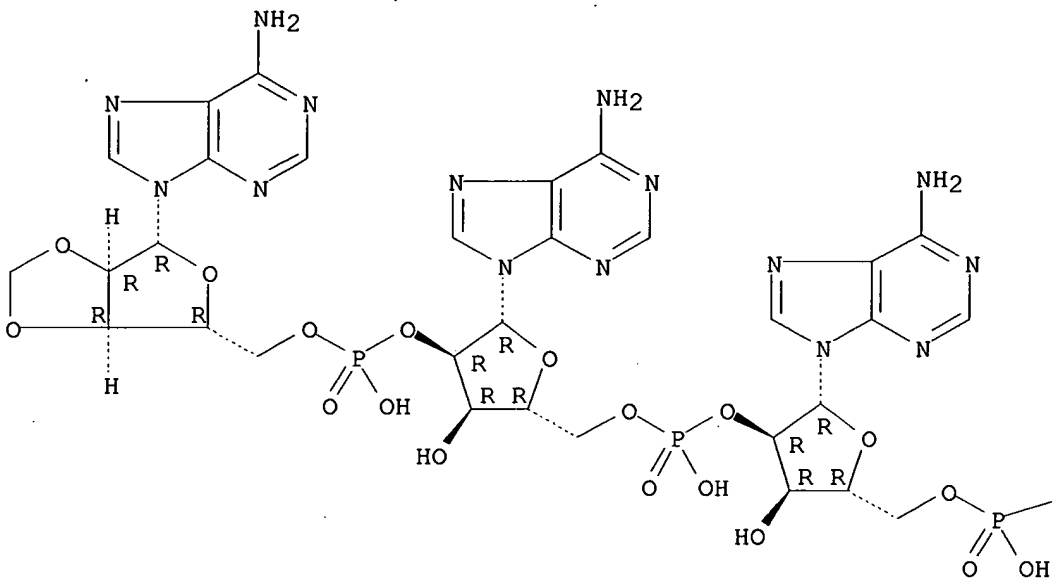
IT **85818-42-4 85818-43-5 85818-47-9**
**85856-74-2**
RL: BIOL (Biological study)
(stability and biol. activity of, RNase activation in relation to, in human and lab. animal system)

RN 85818-42-4 HCAPLUS

CN Adenosine, 5'-O-[hydroxy(phosphonooxy)phosphinyl]adenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

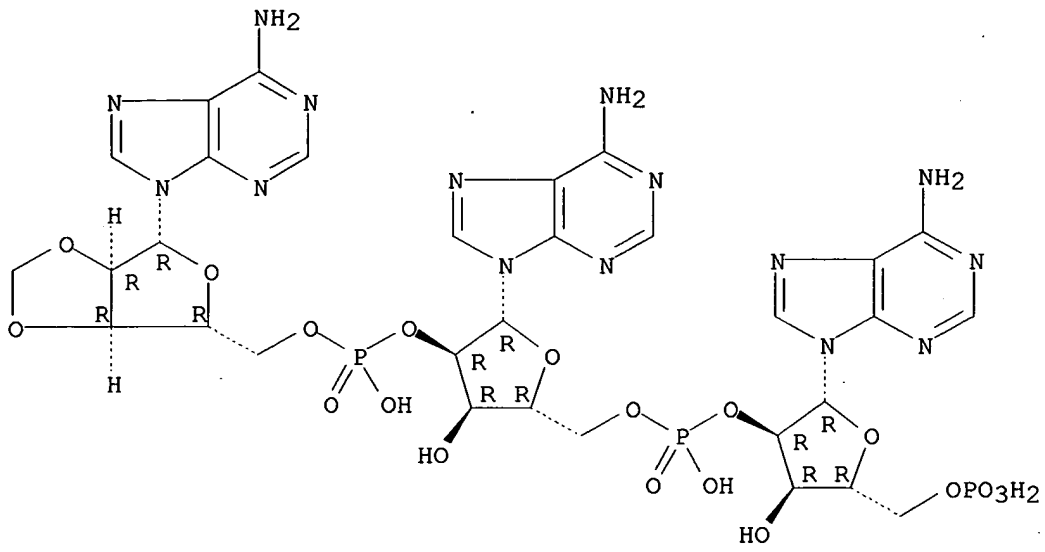


PAGE 1-B

—OPO3H2

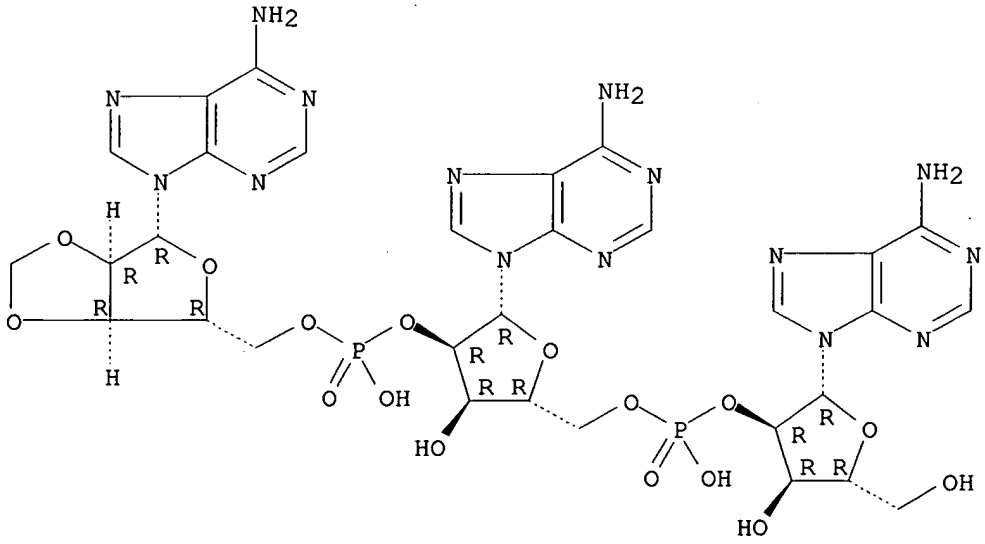
RN 85818-43-5 HCAPLUS
CN Adenosine, 5'-O-phosphonoadenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 85818-47-9 HCAPLUS
CN Adenosine, adenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-2',3'-O-methylene- (9CI) (CA INDEX NAME)

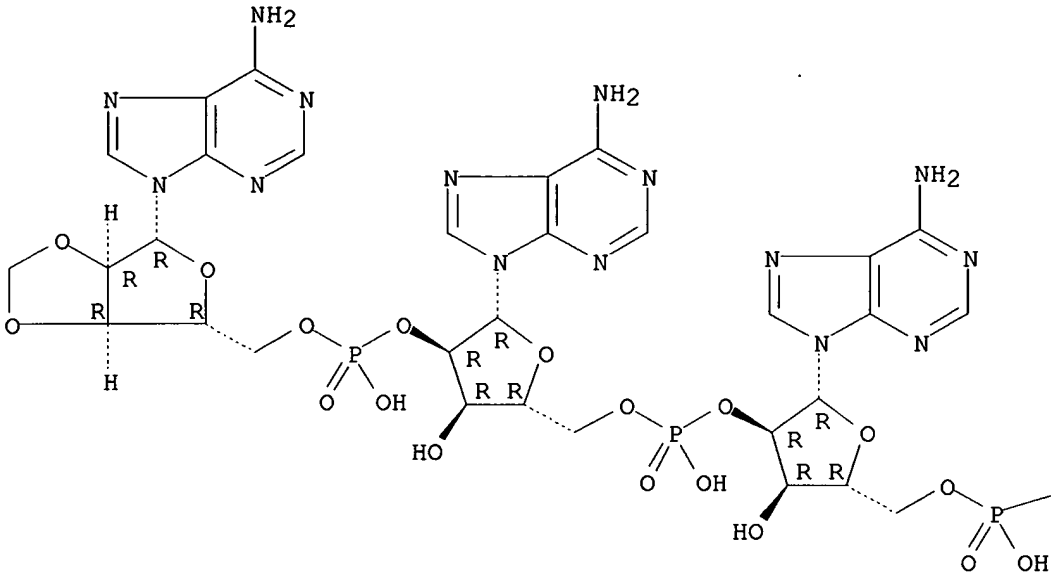
Absolute stereochemistry.



RN 85856-74-2 HCAPLUS
CN Adenosine, 5'-O-[hydroxy(methylthio)phosphinyl]adenylyl-(2'.fwdarw.5')-adenylyl-(2'.fwdarw.5')-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

— SMe

L30 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:168881 HCAPLUS
DOCUMENT NUMBER: 90:168881
TITLE: 4'-Substituted nucleosides. 5. Hydroxymethylation of nucleoside 5'-aldehydes
AUTHOR(S): Jones, Gordon H.; Taniguchi, Masao; Tegg, Derek; Moffatt, John G.
CORPORATE SOURCE: Inst. Mol. Biol., Syntex Res., Palo Alto, CA, USA
SOURCE: Journal of Organic Chemistry (1979), 44(8), 1309-17

CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English

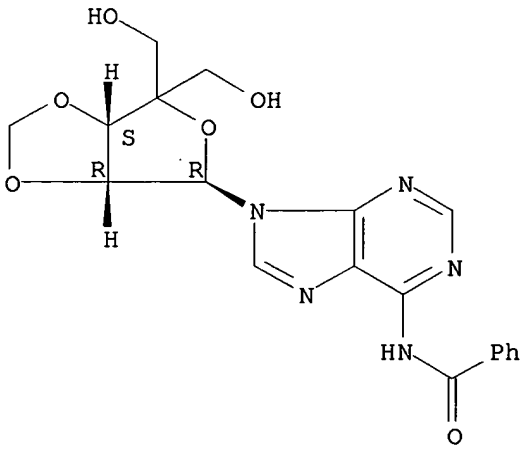
AB Crossed aldol condensation between variously substituted nucleoside 5'-aldehydes and HCHO in the presence of aq. NaOH led, following rate-limiting Cannizzaro redn., to the corresponding 4'-hydroxymethylnucleoside derivs. The speed and overall efficiency of the above reactions were improved by incorporating a borohydride redn. of the initial aldol product rather than relying upon the normal Cannizzaro redn. Such reactions conducted with 2',3'-unsubstituted nucleoside 5'-aldehydes gave mixts. of 4'-hydroxymethylnucleosides epimeric at C-3', presumably via a reverse aldol cleavage followed by recyclization. Hence the use of base stable 2',3'-O-protecting groups is recommended for these reactions. In the case of 2',3'-O-isopropylidene derivs. of N6-benzoyladenosine and N4-benzoylcytidine 5'-aldehydes, some exchange of the acetonide by a methylene group was obsd. and mechanism is proposed. For extension to the 2'-deoxynucleoside series, the corresponding hydroxymethylation of 3'-O-benzylthymidine 5'-aldehyde followed by catalytic hydrogenolysis led to 4'-hydroxymethylthymidine. Synthesis of a no. of new, variously protected nucleoside 5'-aldehydes are described.

IT **63592-94-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 63592-94-9 HCAPLUS

CN Adenosine, N-benzoyl-4'-C-(hydroxymethyl)-2',3'-O-methylene- (9CI) (CA INDEX NAME)

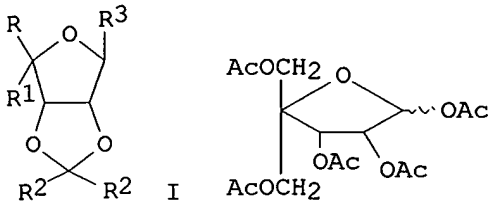
Absolute stereochemistry.




L30 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1977:453510 HCAPLUS
DOCUMENT NUMBER: 87:53510
TITLE: Synthetic routes to 4'-hydroxymethylnucleosides
AUTHOR(S): Youssefhey, R.; Tegg, D.; Verheyden, J. P. H.; Jones, G. H.; Moffatt, J. G.
CORPORATE SOURCE: Inst. Mol. Biol., Syntex Res., Palo Alto, CA, USA
SOURCE: Tetrahedron Letters (1977), (5), 435-8
CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I II

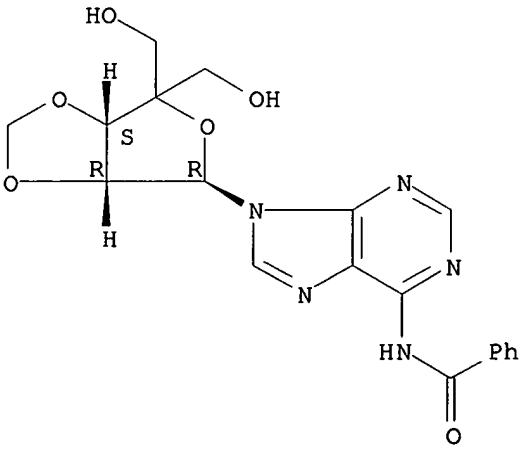
AB The aldehydes I (R = CHO, R1 = H)[R22 = (CH2)5, R3 = uracil; R2 = Me, R3 = N6-benzoyladenine] on treatment with HCHO and aq. NaOH at room temp. gave 38-9% I (R = R1 = CH2OH, R2, R3 as before) which on hydrolysis with 9:1 CF3CO2H-H2O gave the unprotected 4'-hydroxymethyl nucleosides. The acetoxymethyl compd. II, prepd. from 3-O-benzyl-1,2-O-isopropylidene-.alpha.-D-allofuranose by sequential NaIO4 oxidn., condensation with HCHO and aq. NaOH at 20.degree. for 4 days, hydrogenolysis, acetylation, and acetolysis, condensed with a variety of heterocyclic bases. E.g., II with chloropurine in MeCN at 55.degree. for 2 h in the presence of Hg(CN)2 and SnCl4 gave 84% 9-(4-acetoxymethyl-2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)-6-chloropurine which with NH3(l) gave 4'-hydroxymethyladenosine.

IT **63592-94-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 63592-94-9 HCAPLUS

CN Adenosine, N-benzoyl-4'-C-(hydroxymethyl)-2',3'-O-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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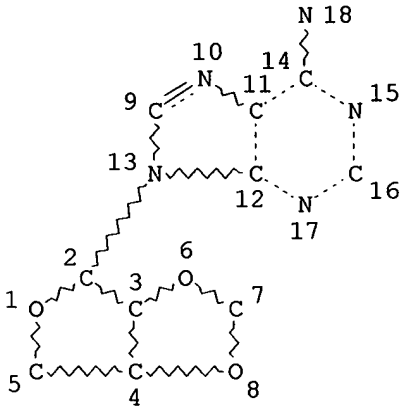


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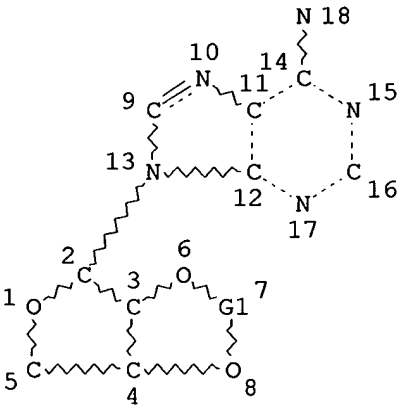






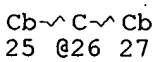


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NUMBER OF NODES IS  27

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L31         1068 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6
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only a few printed

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L31  ANSWER 1 OF 1068  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:831353  HCAPLUS
DOCUMENT NUMBER:          138:73419
TITLE:                    Gel formation properties of a uracil-appended
                          cholesterol gelator and cooperative effects of the
                          complementary nucleobases
AUTHOR(S):                Snip, Erwin; Koumoto, Kazuya; Shinkai, Seiji
CORPORATE SOURCE:         Chemotransfiguration Project, Japan Science and
                          Technology Corporation (JST), Kurume, Fukuoka,
                          839-0861, Japan
SOURCE:                   Tetrahedron (2002), 58(43), 8863-8873
                          CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER:                Elsevier Science Ltd.
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
GI
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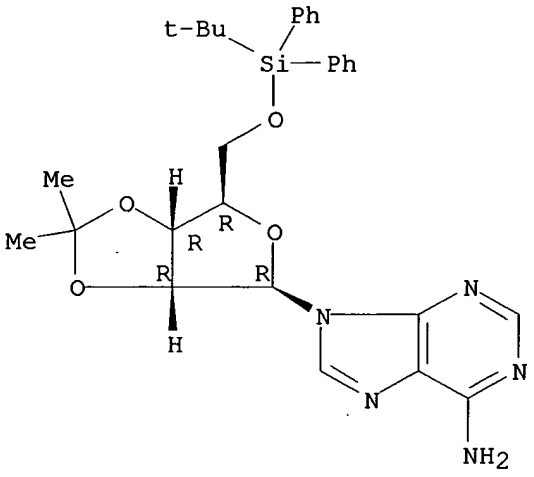
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The authors designed and synthesized a uracil-appended cholesterol gelator I in order to control the gel stability and the gel morphol. by addn. of the complementary and non-complementary nucleobase derivs. Compd. I forms columnar stacks in cyclohexane due to the van der Waals interaction (cholesterol-cholesterol interaction) and the intergelator hydrogen bonding between uracil moieties. Addn. of a 'monomeric' adenosine, II, into the gel only decreases the stability with increasing the concn. The destabilization is ascribed to a lack of intergelator hydrogen bonding accompanied with forming the complementary base pairs between I and II. In contrast, addn. of an adenine-appended cholesterol induces a different behavior; with increasing concn. the mixed gel is initially stabilized and then destabilized, giving rise to a max. at the ratio of I/adenine-appended cholesterol = 1:1 for the Tgel plot. One may consider, therefore, that when the additive has a common, column-forming cholesterol

moiety, the cholesterol-cholesterol interaction can operate cooperatively with the complementary base pairing. In addn., the gel fiber structure is clearly changed by the addn. of the adenine-appended cholesterol. Taking the fact that there is no report for such an additive effect inducing a structural change with maintaining the gel stability into consideration, the authors' attempt at combining cholesterol columnar stacks with the nucleobase additives provides a new methodol. to control the stability and the morphol. of organogels.

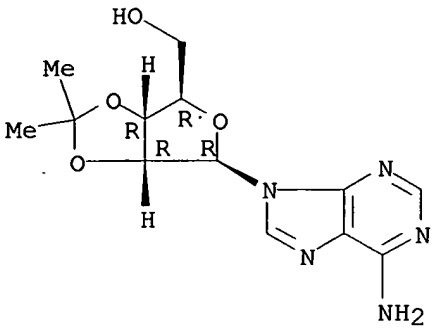
IT **213552-31-9P**
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(prepn. of uracil-appended cholesterol gelator and effects on gel stability and morphol. using complementary and non-complementary nucleobases)
RN 213552-31-9 HCAPLUS
CN Adenosine, 5'-O-[(1,1-dimethylethyl)diphenylsilyl]-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **362-75-4**, 2',3'-O-Isopropylidene adenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of uracil-appended cholesterol gelator and effects on gel stability and morphol. using complementary and non-complementary nucleobases)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 2 OF 1068 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:816750 HCAPLUS
DOCUMENT NUMBER: 138:39493
TITLE: Adenosine 5'-O-(1-Boranotriphosphate) Derivatives as Novel P2Y1 Receptor Agonists
AUTHOR(S): Nahum, Victoria; Zuendorf, Gregor; Levesque, Sebastien A.; Beaudoin, Adrien R.; Reiser, Georg; Fischer, Bilha
CORPORATE SOURCE: Department of Chemistry Gonda-Goldschmied Medical Research Center, Bar-Ilan University, Ramat-Gan, 52900, Israel
SOURCE: Journal of Medicinal Chemistry (2002), 45(24), 5384-5396
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:39493

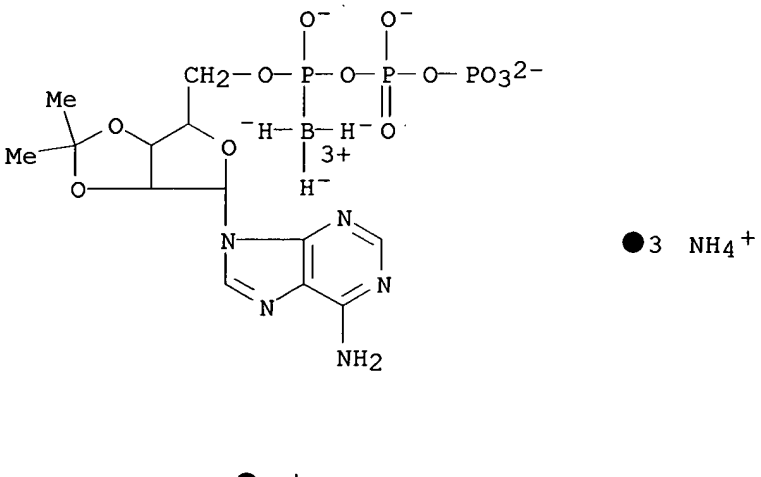
AB P2-receptors (P2-Rs) represent important targets for novel drug development. Most ATP analogs proposed as potential drug candidates have short-comings such as limited receptor-selectivity and limited stability that justify the search for new P2-R agonists. Therefore, a novel series of nucleotides based on the adenosine 5'-O-(1-boranotriphosphate) (ATP-.alpha.-B) scaffold was developed and tested as P2Y1-R agonists. An efficient four-step one-pot synthesis of several ATP-.alpha.-B analogs from the corresponding nucleosides was developed, as well as a facile method for the sepn. of the diastereoisomers (A and B isomers) of the chiral products. The potency of the new analogs as P2Y1-R agonists was evaluated by the agonist-induced Ca2+ release of HEK 293 cells stably transfected with rat-brain P2Y1-R. ATP-.alpha.-B A isomer was equipotent with ATP (EC50 = 2 .times. 10-7 M). However, 2-MeS- and 2-Cl-substitutions on ATP-.alpha.-B (A isomer) increased the potency of the agonist up to 100-fold, with EC50 values of 4.5 .times. 10-9 and 3.6 .times. 10-9 M, compared to that of the ATP-.alpha.-B (A isomer). Diastereoisomers A of all ATP-.alpha.-B analogs were more potent in inducing Ca2+ release than the corresponding B counterparts, with a 20-fold difference for 2-MeS-ATP-.alpha.-B analogs. The chem. stability of the new P2Y1-R agonists was evaluated by 31P NMR under physiol. and gastric-juice pH values at 37 .degree.C, with rates of hydrolysis of 2-MeS-ATP-.alpha.-B of 1.38 .times. 10-7 s-1 (t1/2 of 1395 h) and 3.24 .times. 10-5 s-1 (t1/2 = 5.9 h), resp. The enzymic stability of the new analogs toward spleen NTPDase was evaluated. Most of the new analogs were

poor substrates for the NTPDase, with ATP-.alpha.-B (A isomer) hydrolysis being 5% of the hydrolysis rate of ATP. Diastereoisomers A and B exhibited different stability, with A isomers being significantly more stable, up to 9-fold. Furthermore, A isomers that are potent P2Y1-R agonists barely interact with NTPDase, thus exhibiting protein selectivity. Therefore, on the basis of our findings, the new, highly water-sol., P2Y1-R agonists may be considered as potentially promising drug candidates.

IT **478867-98-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of adenosine boranotriphosphate derivs. as novel P2Y1 receptor agonists)

RN 478867-98-0 HCAPLUS

CN Borate(4-), trihydro[2',3'-O-(1-methylethylidene)adenosine 5'.fwdarw.P-[triphosphato(III,V,V)-.kappa.P](4-)]-, triammonium hydrogen, (T-4)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 3 OF 1068 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:789678 HCAPLUS

DOCUMENT NUMBER: 138:24909

TITLE: Synthesis and Evaluation of Analogs of 5'-([(Z)-4-Amino-2-butenyl]methylamino)-5'-deoxyadenosine as Inhibitors of Tumor Cell Growth, Trypanosomal Growth, and HIV-1 Infectivity

AUTHOR(S): Marasco, Canio J., Jr.; Kramer, Debora L.; Miller, John; Porter, Carl W.; Bacchi, Cyrus J.; Rattendi, Donna; Kucera, Louis; Iyer, Nathan; Bernacki, Ralph; Pera, Paula; Sufrin, Janice R.

CORPORATE SOURCE: Grace Cancer Drug Center, Department of Pharmacology and Therapeutics, Roswell Park Cancer Institute, Buffalo, NY, 14263, USA

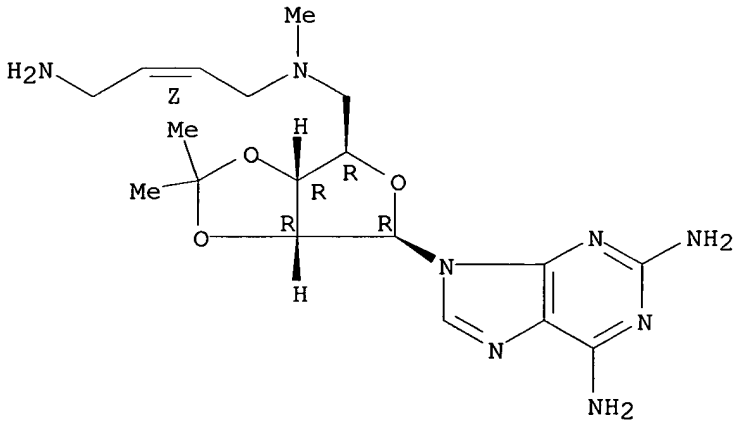
SOURCE: Journal of Medicinal Chemistry (2002), 45(23), 5112-5122

CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:24909

AB A well-defined series of 5'-([(Z)-4-amino-2-butenyl]methylamino)-5'-deoxyadenosine analogs was designed and synthesized in order to further ascertain the optimal structural requirements for S-adenosylmethionine decarboxylase inhibition and potentially to augment and perhaps sep. their antiproliferative and antitrypanosomal activities. Most structural modifications had a deleterious affect on both the antitrypanosomal and antineoplastic activity of 5'-([(Z)-4-amino-2-butenyl]methylamino)-5'-deoxyadenosine. However, di-O-acetylation of the parent compd. produced a potential prodrug that caused markedly pronounced inhibition of trypanosomal and neoplastic cell growth and viability. Moreover, the acetylated deriv. of 5'-([(Z)-4-amino-2-butenyl]methylamino)-5'-deoxyadenosine did inhibit HIV-1 growth and infectivity, whereas the parent compd. did not.

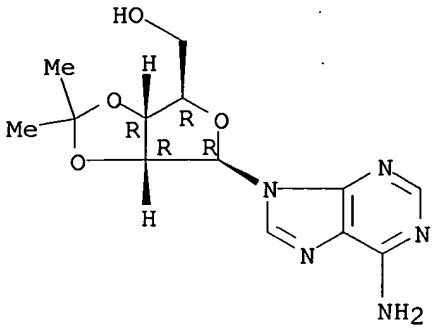
IT **478161-16-9P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and evaluation of analogs of aminobutenylmethylaminodeoxyadenosine as inhibitors of tumor cell growth trypanosomal growth and HIV infectivity)
RN 478161-16-9 HCAPLUS
CN Adenosine, 2-amino-5'-[[(2Z)-4-amino-2-butenyl]methylamino]-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



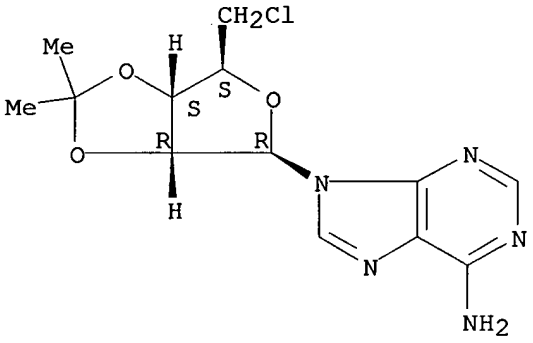

IT **362-75-4 24514-56-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and evaluation of analogs of aminobutenylmethylaminodeoxyadenosine as inhibitors of tumor cell growth trypanosomal growth and HIV infectivity)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



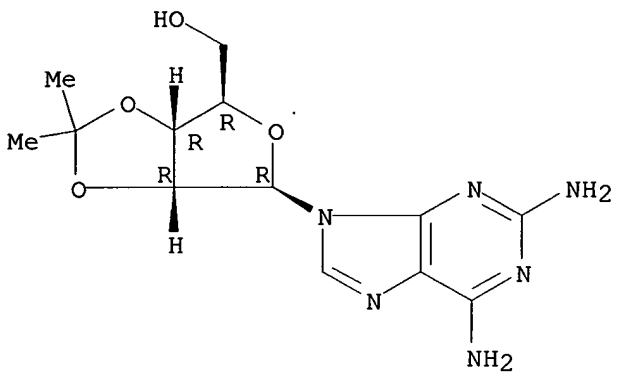
RN 24514-56-5 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



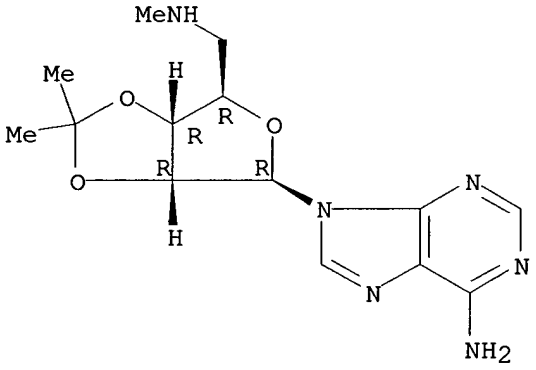
IT **30685-38-2P 34245-49-3P 478161-08-9P**
**478161-09-0P 478161-10-3P 478161-11-4P**
**478161-13-6P 478161-14-7P 478161-15-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and evaluation of analogs of aminobutenylmethylaminodeoxyadenosine as inhibitors of tumor cell growth trypanosomal growth and HIV infectivity)
RN 30685-38-2 HCAPLUS
CN Adenosine, 2-amino-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



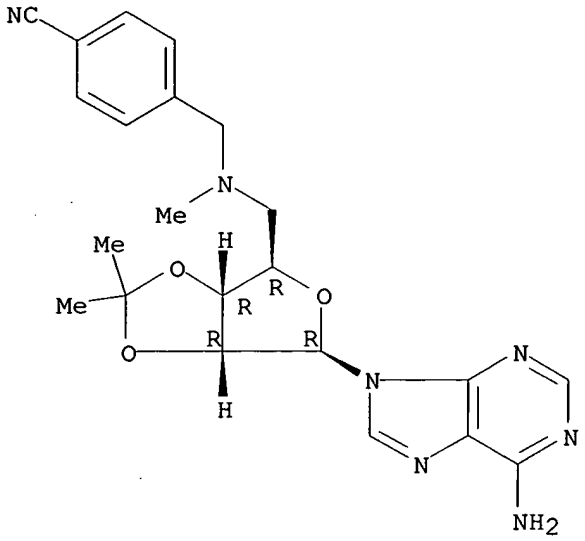
RN 34245-49-3 HCAPLUS
CN Adenosine, 5'-deoxy-5'-(methylamino)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



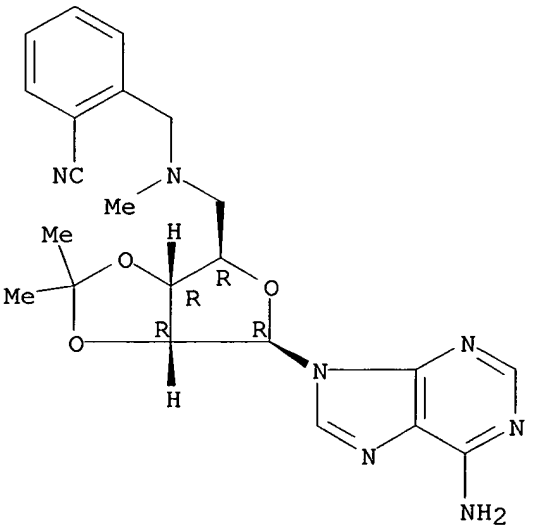
RN 478161-08-9 HCAPLUS
CN Adenosine, 5'-[[(4-cyanophenyl)methyl]methylamino]-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



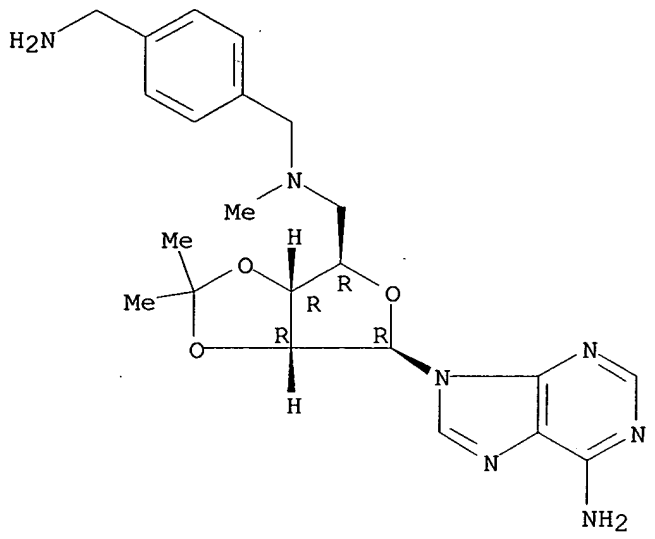
RN 478161-09-0 HCAPLUS
CN Adenosine, 5'-[[(2-cyanophenyl)methyl]methylamino]-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



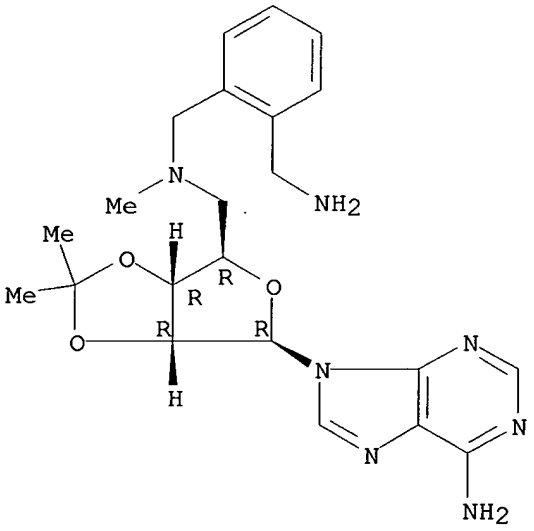
RN 478161-10-3 HCAPLUS
CN Adenosine, 5'-[[[4-(aminomethyl)phenyl]methyl]methylamino]-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



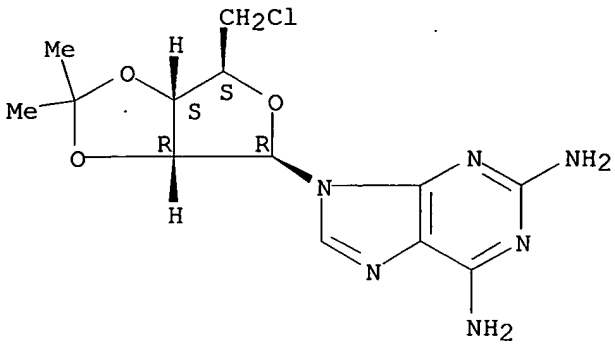
RN 478161-11-4 HCAPLUS
CN Adenosine, 5'-[[[2-(aminomethyl)phenyl]methyl]methylamino]-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



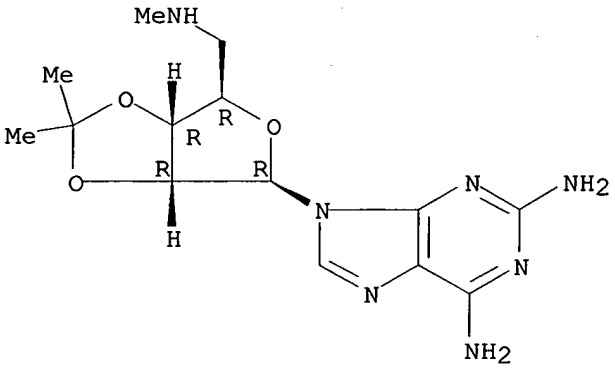
RN 478161-13-6 HCAPLUS
CN Adenosine, 2-amino-5'-chloro-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



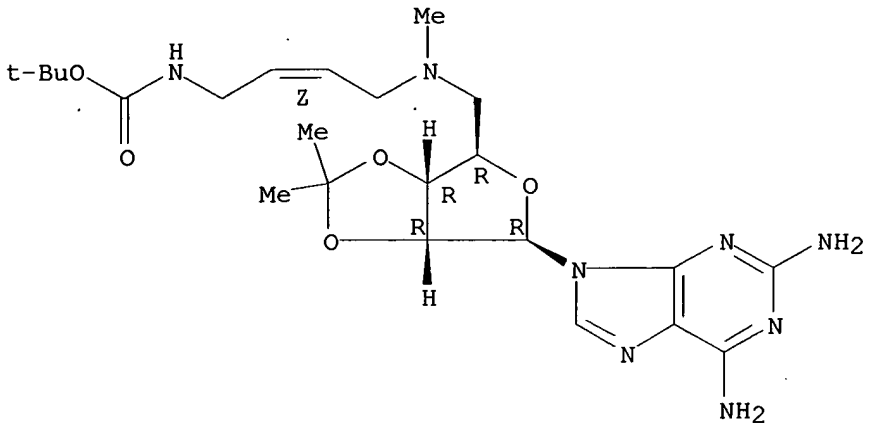
RN 478161-14-7 HCAPLUS
CN Adenosine, 2-amino-5'-deoxy-5'-(methylamino)-2',3'-O-(1-methylethylidene)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



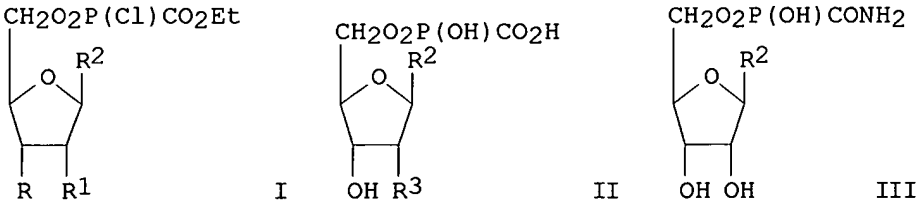
RN 478161-15-8 HCAPLUS
CN Adenosine, 2-amino-5'-deoxy-5'-[[(2Z)-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-butenyl]methylamino]-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 500 OF 1068 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:497864 HCAPLUS
DOCUMENT NUMBER: 105:97864
TITLE: Synthesis and antiviral activity of certain nucleoside 5'-phosphonoformate derivatives
AUTHOR(S): Vaghefi, Morteza M.; McKernan, Patricia A.; Robins, Roland K.
CORPORATE SOURCE: Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA
SOURCE: Journal of Medicinal Chemistry (1986), 29(8), 1389-93
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 105:97864
GI

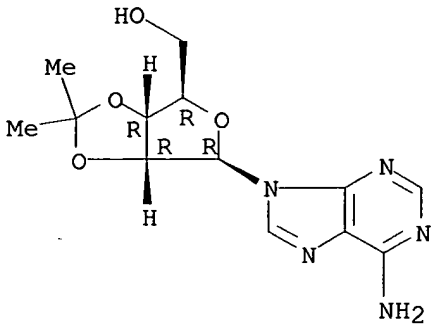


AB EtO2CP(O)Cl2 was prepd. and condensed with adenosine, guanosine, 2'-deoxyadenosine, and 2'-deoxyguanosine to yield nucleotides I (R,R1 = OH; RR1 = OCMe2O; R = OAc, R1 = H; R2 = adenine, guanine). Alk. treatment of I gave phosphonates II (R3 = H, OH). Treatment of I (R,R1 = OH) with NH3-MeOH gave (aminocarbonyl)phosphonate III. II (R3 = H, R2 = adenine) exhibited the most potent antiviral activity of the group of nucleotides tested in vitro and was most active against herpes viruses, esp. HSV-2 (ED50 = 40.mu.M). All of the compds. tested were nontoxic to confluent Vero cells at .ltoreq. 5 .times. 103 .mu.M.

IT **362-75-4**

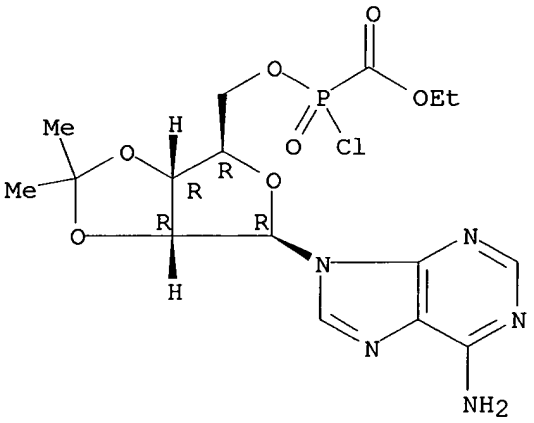
RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphorylation of)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **102831-57-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)
RN 102831-57-2 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)-, 5'-[(ethoxycarbonyl)phosphonochl
oridate] (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 501 OF 1068 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:479310 HCAPLUS
DOCUMENT NUMBER: 105:79310
TITLE: N6-Substituted deoxyribose analogs of adenosines
INVENTOR(S): Hamilton, Harriet W.; Bristol, James A.; Moos, Walter; Trivedi, Bharat K.; Taylor, Michael; Patt, William C.
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: Eur. Pat. Appl., 69 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent

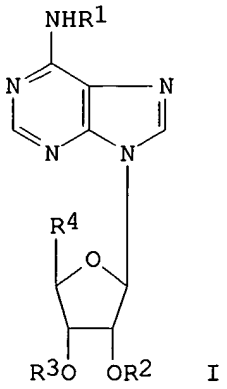
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 181129 | A2 | 19860514 | EP 1985-307717 | 19851025 |
| EP 181129 | A3 | 19870513 | | |
| EP 181129 | B1 | 19890308 | | |
| R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| AU 8548888 | A1 | 19860508 | AU 1985-48888 | 19851021 |
| AU 575438 | B2 | 19880728 | | |
| FI 8504153 | A | 19860427 | FI 1985-4153 | 19851023 |
| FI 81587 | B | 19900731 | | |
| FI 81587 | C | 19901112 | | |
| ZA 8508154 | A | 19860625 | ZA 1985-8154 | 19851023 |
| DK 8504884 | A | 19860427 | DK 1985-4884 | 19851024 |
| NO 8504278 | A | 19860428 | NO 1985-4278 | 19851025 |
| NO 165495 | B | 19901112 | | |
| NO 165495 | C | 19910220 | | |
| JP 61148194 | A2 | 19860705 | JP 1985-237759 | 19851025 |
| ES 548238 | A1 | 19861201 | ES 1985-548238 | 19851025 |
| AT 41158 | E | 19890315 | AT 1985-307717 | 19851025 |
| CA 1260931 | A1 | 19890926 | CA 1985-493849 | 19851025 |
| CN 85108658 | A | 19860716 | CN 1985-108658 | 19851026 |
| CN 1013448 | B | 19910807 | | |
| ES 555142 | A1 | 19871101 | ES 1986-555142 | 19860520 |

PRIORITY APPLN. INFO.:

| | |
|---|---|
| US 1984-665217 | 19841026 |
| US 1984-665232 | 19841026 |
| US 1984-665233 | 19841026 |
| US 1985-772315 | 19850906 |
| EP 1985-307717 | 19851025 |

GI




I

AB 5'-Deoxyadenosines I (R1 = cycloalkyl, CH2CHPh2, 1-indanyl, 1-tetralinyl, CHMeCH2Ph, 1-naphthylmethyl; R2 and R3 are H, alkyl, alkanoyl, etc.; R4 = Me, halomethyl, CH2SMe) were prepd., and they showed antipsychotic, antihypertensive, and analgesic activity. 6-(2,2-Diphenylethylamino)purine was treated with a 5-deoxyribose deriv. to give

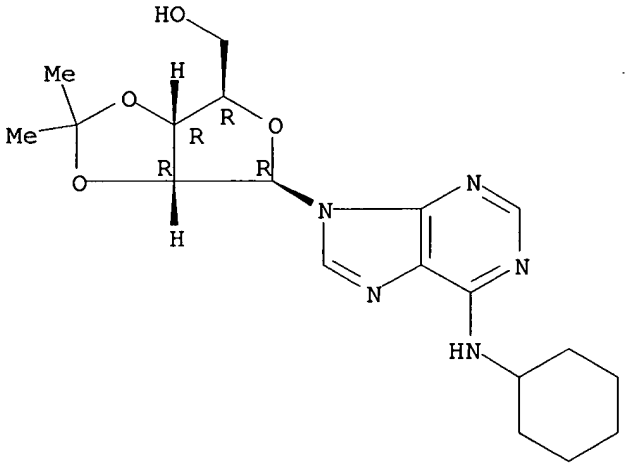
I (R1 = CH2CHPh2, R2 = R3 = H, R4 = Me).

IT **3369-66-2P 103626-39-7P 103626-41-1P 103626-42-2P 103626-44-4P 103626-45-5P 103626-46-6P 103626-49-9P 103626-50-2P 103626-51-3P 103626-53-5P 103626-58-0P 103626-64-8P 103639-11-8P 103667-48-7P 103729-37-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of)

RN 3369-66-2 HCAPLUS

CN Adenosine, N-cyclohexyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

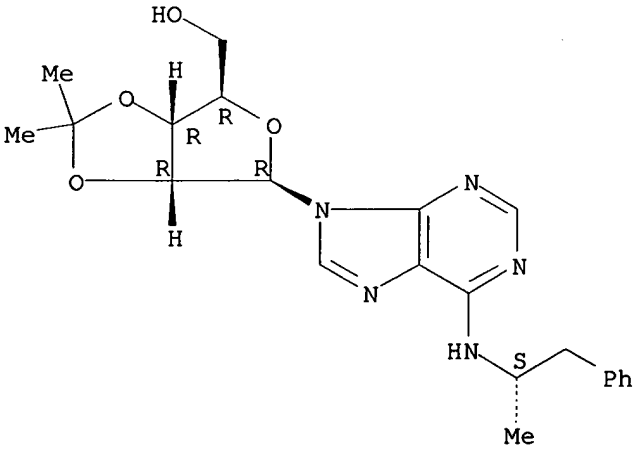
Absolute stereochemistry.




RN 103626-39-7 HCAPLUS

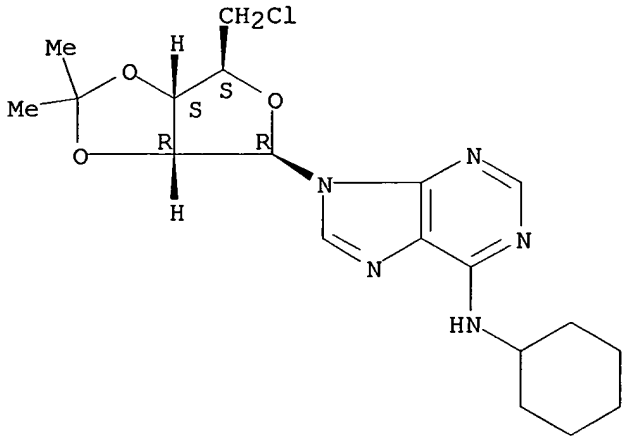
CN Adenosine, 2',3'-O-(1-methylethylidene)-N-(1-methyl-2-phenylethyl)-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 103626-41-1 HCAPLUS
CN Adenosine, 5'-chloro-N-cyclohexyl-5'-deoxy-2',3'-O-(1-methylethylidene)-, monohydrochloride (9CI) (CA INDEX NAME)

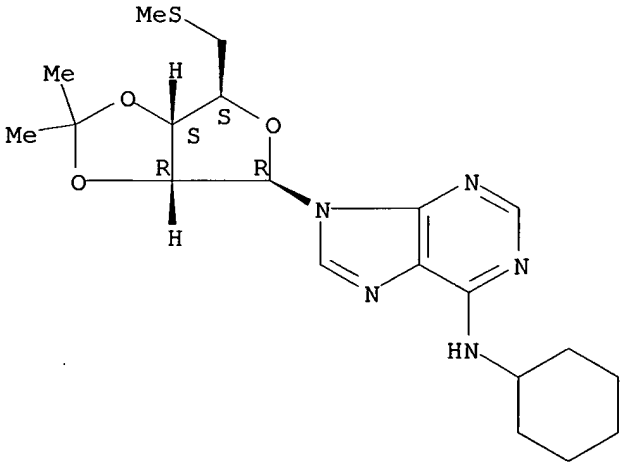
Absolute stereochemistry.




● HCl

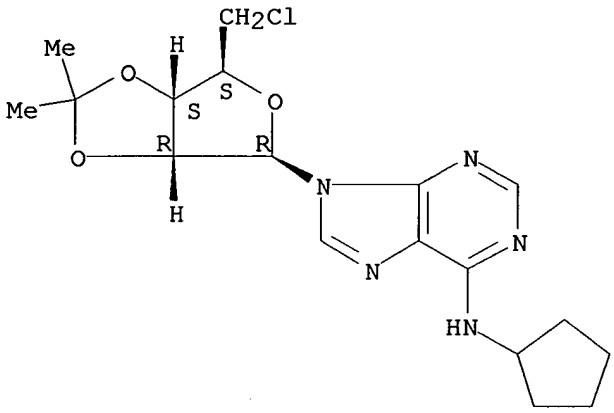
RN 103626-42-2 HCAPLUS
CN Adenosine, N-cyclohexyl-5'-S-methyl-2',3'-O-(1-methylethylidene)-5'-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 103626-44-4 HCAPLUS
CN Adenosine, 5'-chloro-N-cyclopentyl-5'-deoxy-2',3'-O-(1-methylethylidene)-, monohydrochloride (9CI) (CA INDEX NAME)

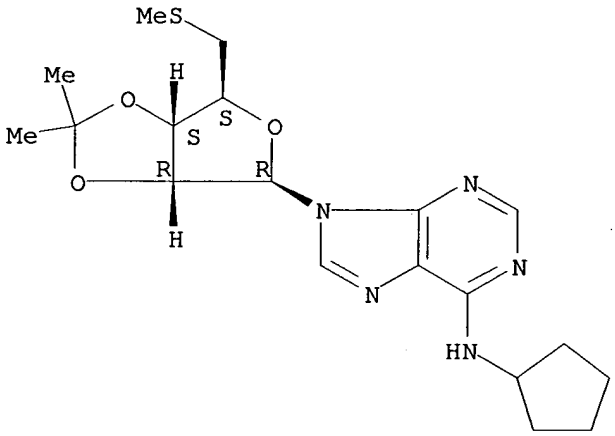
Absolute stereochemistry.



● HCl

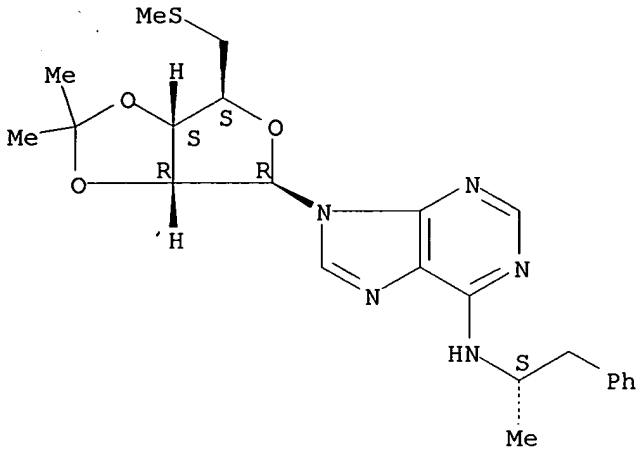
RN 103626-45-5 HCAPLUS
CN Adenosine, N-cyclopentyl-5'-S-methyl-2',3'-O-(1-methylethylidene)-5'-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



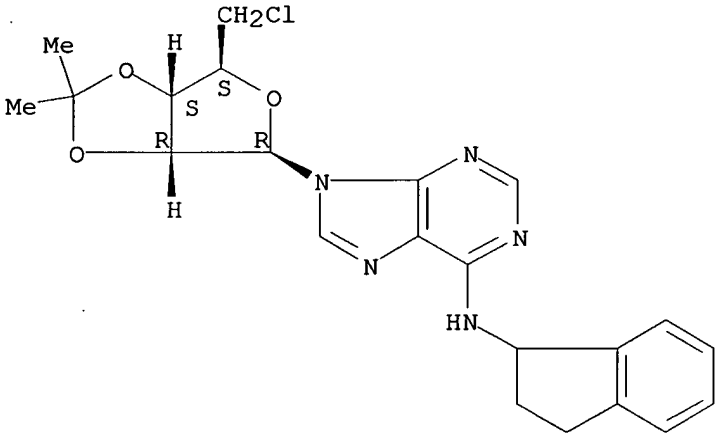
RN 103626-46-6 HCAPLUS
CN Adenosine, 5'-S-methyl-2',3'-O-(1-methylethylidene)-N-(1-methyl-2-phenylethyl)-5'-thio-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



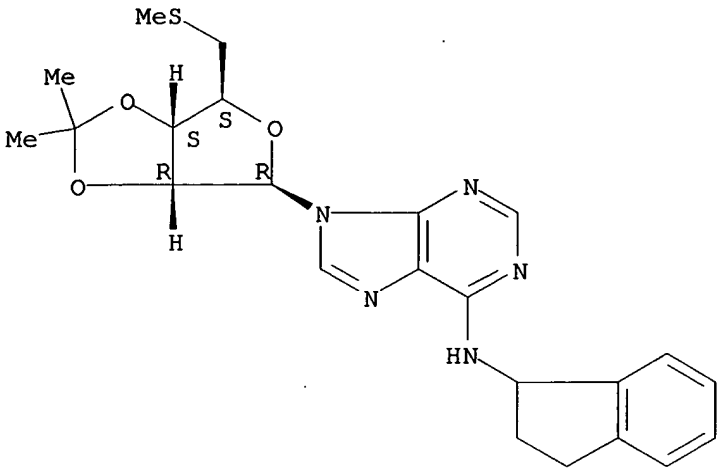

RN 103626-49-9 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-N-(2,3-dihydro-1H-inden-1-yl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



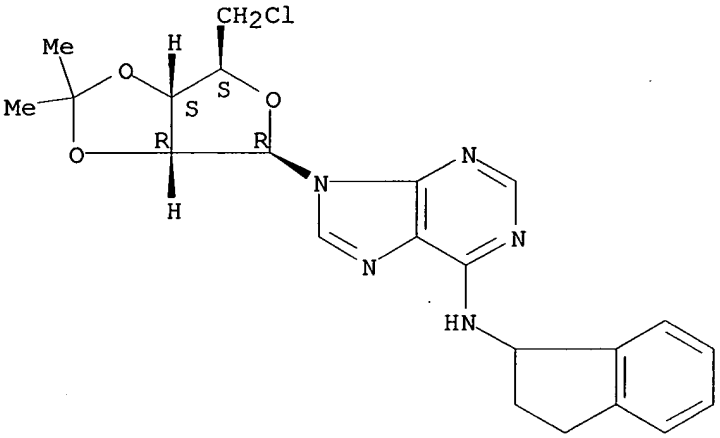

RN 103626-50-2 HCAPLUS
CN Adenosine, N-(2,3-dihydro-1H-inden-1-yl)-5'-S-methyl-2',3'-O-(1-methylethylidene)-5'-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 103626-51-3 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-N-(2,3-dihydro-1H-inden-1-yl)-2',3'-O-(1-methylethylidene)-, monohydrochloride (9CI) (CA INDEX NAME)

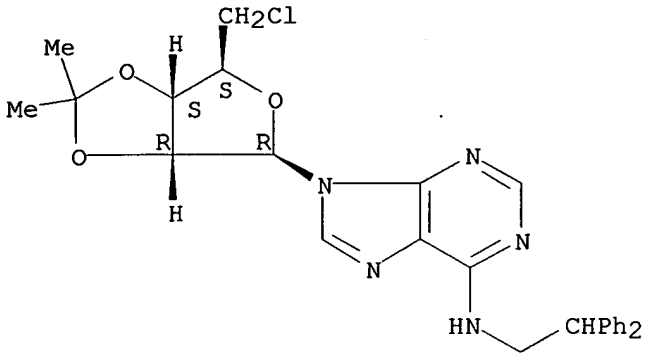
Absolute stereochemistry.




● HCl

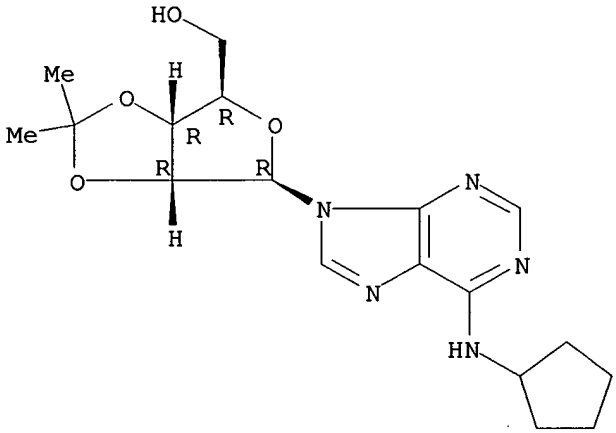
RN 103626-53-5 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-N-(2,2-diphenylethyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



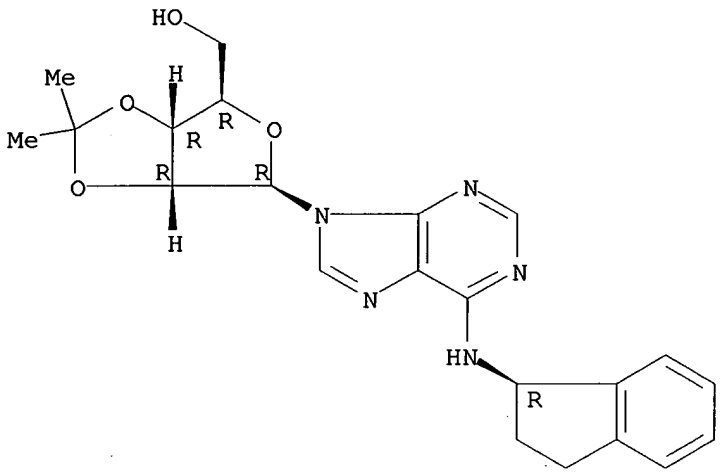
RN 103626-58-0 HCAPLUS
CN Adenosine, N-cyclopentyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



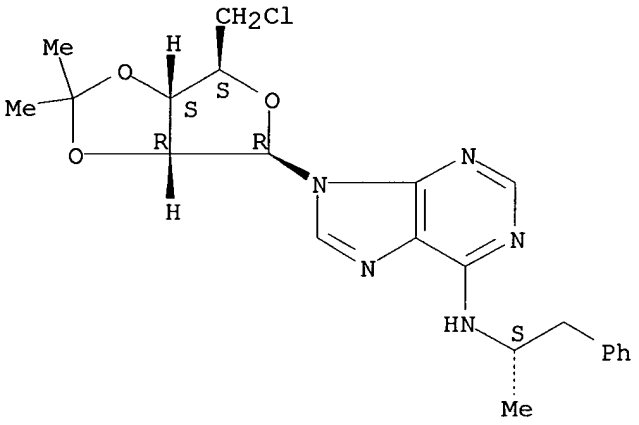
RN 103626-64-8 HCAPLUS
CN Adenosine, N-(2,3-dihydro-1H-inden-1-yl)-2',3'-O-(1-methylethylidene)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



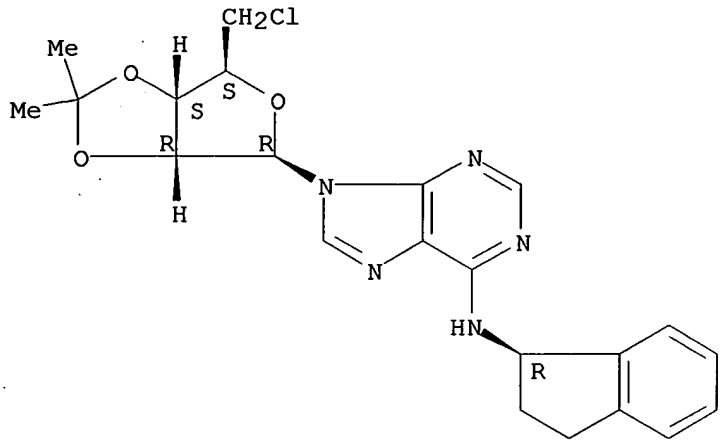
RN 103639-11-8 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-2',3'-O-(1-methylethylidene)-N-(1-methyl-2-phenylethyl)-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



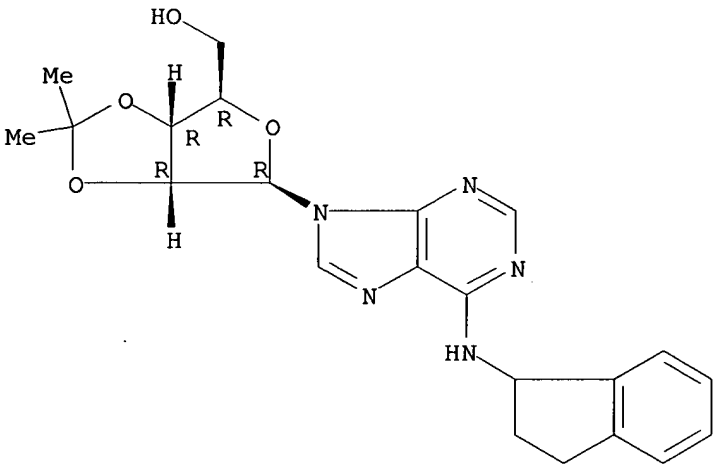
RN 103667-48-7 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-N-(2,3-dihydro-1H-inden-1-yl)-2',3'-O-(1-methylethylidene)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 103729-37-9 HCAPLUS
CN Adenosine, N-(2,3-dihydro-1H-inden-1-yl)-2',3'-O-(1-methylethylidene)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

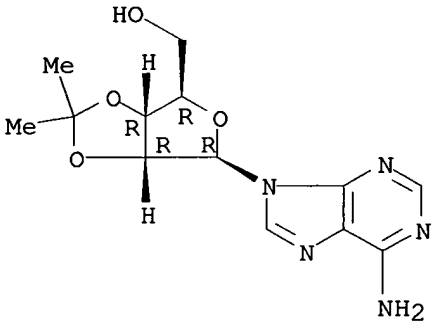


L31 ANSWER 502 OF 1068 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:474858 HCAPLUS
DOCUMENT NUMBER: 105:74858
TITLE: Mevalonate-5-diphosphate decarboxylase: stereochemical course of ATP-dependent phosphorylation of mevalonate 5-diphosphate
AUTHOR(S): Iyengar, Radha; Cardemil, Emilio; Frey, Perry A.
CORPORATE SOURCE: Dep. Quim., Univ. Santiago, Santiago, Chile
SOURCE: Biochemistry (1986), 25(16), 4693-8
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chicken liver mevalonate 5-diphosphate carbxoylase catalyzes the reaction of mevalonate 5-diphosphate (MVADP) with ATP to produce isopentenyl diphosphate, ADP, CO2, and inorg. phosphate. The overall reaction

involves an anti elimination of the tertiary hydroxyl and carboxyl groups. To investigate the mechanism for transfer of the terminal phosphoryl group of ATP to the C-3 O atom of MVADP, the reaction was carried out using stereospecifically labeled (SP)-adenosine 5'-O-(3-thio[3-17O2,18O]triphosphate) ([.gamma.-17O2,18O]ATP.gamma.S) in place of ATP. The configuration of the [17O,18O]thiophosphate produced was found to be RP, corresponding to overall inversion of configuration at the P atom in the thiophosphoryl group transfer step. This result was consistent with the direct transfer of the thiophosphoryl group from (SP)-[.gamma.-17O2,18O]ATP.gamma.S to MVADP at the active site. The result did not indicate the involvement of a covalent thiophosphoryl-enzyme on the reaction pathway.

IT **362-75-4**
RL: PROC (Process)
(conversion of, to oxygen-18-labeled adenosine)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L31 ANSWER 1066 OF 1068 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1958:11156 HCAPLUS
DOCUMENT NUMBER: 52:11156
ORIGINAL REFERENCE NO.: 52:2027g-i,2028a-b
TITLE: Esters of adenosine with organic and inorganic acids
AUTHOR(S): Huber, Gerhard
CORPORATE SOURCE: Forschungslab. Zellstoff-Fabrik Waldhof, Mannheim-Waldhof, Germany
SOURCE: Chem. Ber. (Berlin) (1956), 89, 2853-62
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The m.p. and Rf value in H2O-satd. BuOH were detd. for esters of adenosine (I). The 2',3'-isopropylidene deriv. of I (II) (Rf 0.60) (5 g.) and 30 ml. Ac2O in 100 ml. C5H5N after 2 days yields 6.3 g. II N(6),5'-diacetate-EtOH, Rf 0.85, m. 113-14.degree., which reacts with 10% aq. AcOH to form I 5'-acetate, Rf 0.23. I 2',3',5'-triacetate, sirup, has Rf 0.67. II (5 g.) and 20 ml. (EtCO)2O in 125 ml. C5H5N yield 5 g. II 5'-propionate, sirup, Rf 0.75, which reacts with 10% aq. AcOH to form I 5'-propionate, m. 170-2.degree. (H2O and MeOH), Rf 0.44. Other esters prepd. similarly are: I 2',3',5'-tripropionate, sirup, Rf 0.72; II N(6),5'-dibutyrate, sirup, Rf 0.90; I 5'-butyrate, m. 97-8.degree., Rf 0.48; I dibutyrate, sirup; I trilaurate, sirup; I dipalmitate, sirup; I distearate, amorphous powder; I dioleate, sirup; I tribenzoate, m.

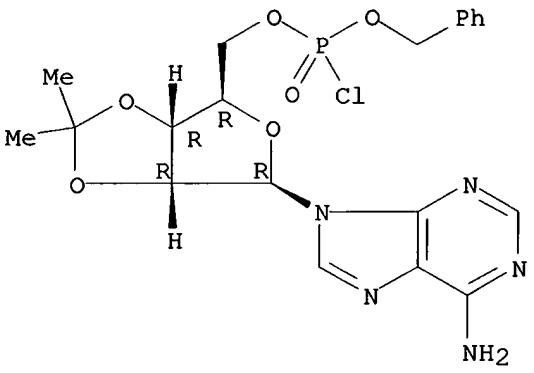
100-4.degree.; II 5'-p-nitrobenzoate, powder, Rf 0.80; I 5'-p-nitrobenzoate, Rf 0.30; I tris(p-nitrobenzoate), m. 220.degree. (decompn.); I tris(p-aminobenzoate), amorphous, m. approx. 200.degree.; II 5'-nicotinate, m. 182-3.degree., Rf 0.65; I 5'-nicotinate, m. 157-8.degree., Rf 0.30; I trinicotinate, amorphous, m. approx. 95.degree.; II 5'-isonicotinate, m. 179-81.degree., Rf 0.60; I 5'-isonicotinate, Rf 0.26; I triisonicotinate, Rf 0.70; II 5'-acid succinate, Rf 0.15; I 5'-acid succinate, m. 172-4.degree., Rf 0.40 in 60% aq. PrOH; II 5'-acid phthalate, m. 163-5.degree., Rf 0.15; I bis(acid phthalate), m. 132-4.degree., Rf 0.58. I (5 g.) in C5H5N treated with 4.5 ml. ClSO3H in CHCl3, the product treated with PbO in H2O, the filtered soln. treated with Ag2SO4, refiltered, treated with excess BaCO3, satd. with H2S, filtered, treated with CO2 and concd., and the residue pptd. from H2O with EtOH, yields 12 g. Ba salt of I tris(acid sulfate), Rf 0.22 in 60% aq. PrOH, converted to the Na salt by Na2SO4 or cation exchange resins. Similarly starting with II is prepd. the Ba salt of I 5'-monosulfate, Rf 0.52 in 60% aq. PrOH. I and fuming HNO3 yield a mixt. of I dinitrate, Rf 0.83, and inosine dinitrate, Rf 0.70, m. 190-6.degree. (gas evolution) (aq. dioxane).

IT **86529-23-9**, Adenosine, 2',3'-O-isopropylidene-, 5'-(benzyl phosphorochloridate)
(esters)

RN 86529-23-9 HCAPLUS

CN Adenosine, 2',3'-O-(1-methylethylidene)-, 5'-(phenylmethyl phosphorochloridate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

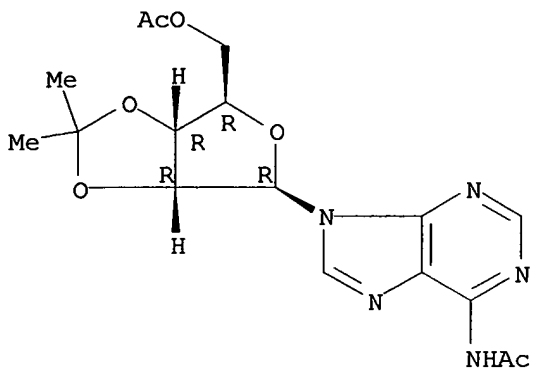



IT **109816-78-6**, Adenosine, N-acetyl-2',3'-O-isopropylidene-, 5'-acetate **113453-89-7**, Butyramide, N-[9-(2,3-O-isopropylidene-.beta.-D-ribofuranosyl)-9H-purin-6-yl]-, butyrate
(prepn. of)

RN 109816-78-6 HCAPLUS

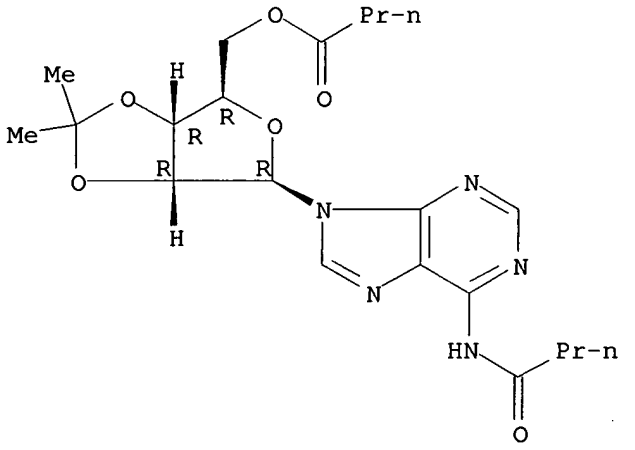
CN Adenosine, N-acetyl-2',3'-O-isopropylidene-, 5'-acetate (6CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 113453-89-7 HCAPLUS
CN Butyramide, N-[9-(2,3-O-isopropylidene-.beta.-D-ribofuranosyl)-9H-purin-6-yl]-, butyrate (6CI) (CA INDEX NAME)

Absolute stereochemistry.




L31 ANSWER 1067 OF 1068 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1957:90775 HCAPLUS
DOCUMENT NUMBER: 51:90775
ORIGINAL REFERENCE NO.: 51:16493i,16494a
TITLE: Nucleotides. XLI. Mixed anhydrides as intermediates in the synthesis of dinucleoside phosphates
AUTHOR(S): Hall, R. H.; Todd, Alexander; Webb, R. F.
CORPORATE SOURCE: Univ. Chem. Lab., Cambridge, UK
SOURCE: J. Chem. Soc. (1957) 3291-6
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 51, 14743i. 5'-Adenosine 5'-uridine phosphate (I) was chosen as a model for an investigation of methods suitable for the synthesis of dinucleoside phosphates. Reactions involving condensation of nucleoside benzyl phosphorochloridates with appropriately protected nucleoside derivs. gave low yields (about 20%). The reaction of the phosphorochloridates with 2,6-lutidine diphenyl phosphate or

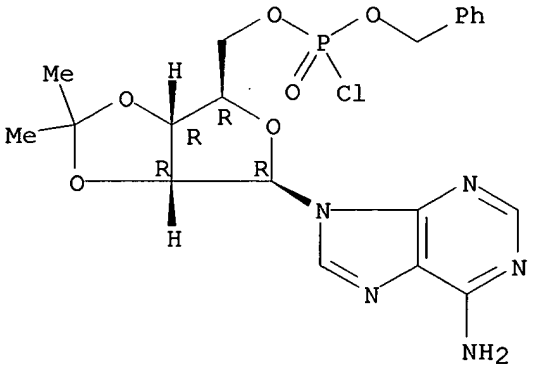
trifluoroacetate gave the mixed anhydrides which gave excellent yields (70%) of I. Similar mixed anhydrides of nucleoside phosphites and diphenyl H phosphate were used to prep. the dinucleoside phosphites which were converted via the phosphorochloridate into I.

IT **86529-23-9**, Adenosine, 2',3'-O-isopropylidene-, 5'-(benzyl phosphorochloridate)
(and its condensation with nucleosides)

RN 86529-23-9 HCAPLUS

CN Adenosine, 2',3'-O-(1-methylethylidene)-, 5'-(phenylmethyl phosphorochloridate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L31 ANSWER 1068 OF 1068 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1957:66670 HCAPLUS

DOCUMENT NUMBER: 51:66670

ORIGINAL REFERENCE NO.: 51:12121b-h

TITLE: Some thionophosphate and phosphoroamidate derivatives of adenosine and certain steroids

AUTHOR(S): Wolff, Manfred E.; Burger, Alfred

CORPORATE SOURCE: Univ. of Virginia, Charlottesville

SOURCE: J. Am. Chem. Soc. (1957), 79, 1970-1
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Et3N (20.2 g.) in 100 cc. dry C6H6 added dropwise with stirring to 38.0 g. Et2NP(O)Cl2 and 18.8 g. PhOH in 300 cc. refluxing dry C6H6 during 45 min., the mixt. refluxed 3 hrs., cooled, and filtered, the filtrate evapd. in vacuo, and the residue treated with 100 cc. dry Et2O, filtered, and fractionated gave 22.5 g. Et2NP(O)- (OPh)Cl (I), b0.4 118.degree., nD25 1.507. The appropriate compd. to be thionophosphorylated (1 equiv.) added with stirring to 1-10 equivs. 3.8% K in dry Me3COH under N, the mixt. dild. with Me3COH at 25.degree. to give a clear soln., the soln. treated dropwise with (EtO)2PSCl as a 30-40% soln. in Me3COH (equiv. to the amt. of K) at 25.degree., refluxed 1-3 hrs. with stirring, and evapd. in vacuo, and the residue dissolved in MeOH or EtOH, filtered, and concd. in vacuo gave the corresponding O,O-di-Et thionophosphate derivs. (II). In this manner were prepd. the following O,O-di-Et thionophosphates (% yield, m.p. or b.p./mm., and optical consts. given): Me 2,3-isopropylidene-5-D-ribofuranosidyl, yellow, 66, 135.degree./0.07 (nD30 1.466), [.alpha.]D30 -46.5.degree. (c 3.81, Me2CO); 3-cholesteryl, plates, 66, 110-11.degree.

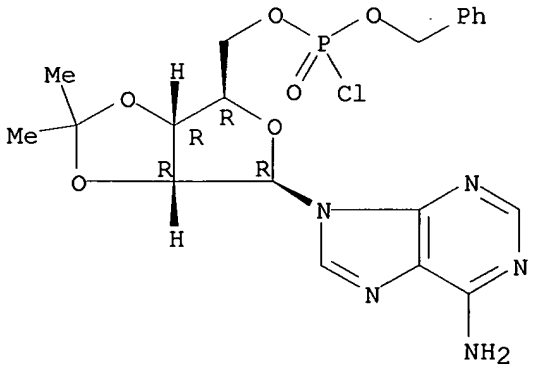
(from 95% EtOH) (all m.ps. are cor.), [.alpha.]D23 -31.2.degree. (c 2.00, CHCl3); 3-ergosteryl, 58, 124-5.degree. (from EtOH-C6H6), [.alpha.]D23 -50.0.degree. (c 3.30, CHCl3); 3-estronyl, 46, 78-9.degree. (from petr. ether and EtOH), [.alpha.]D23 86.0.degree. (c 4.33, CHCl3). 2,'3'-Isopropylideneadenosine treated similarly with exactly 1 equiv. K, the mixt. kept 0.5 hr. at room temp., adjusted to pH 7 with 5% HCl, and evapd. in vacuo, the residue extd. with MeOH, and the residue from the MeOH ext. triturated with dry Et2O gave O,O-di-Et O-(2',3'-isopropylidene-5'-adenosyl) thionophosphate (III), hygroscopic, m. 120-30.degree. [picrate, m. 175-6.degree. (from 95% EtOH)]. Crude sirupy III from a similar run in 300 cc. 0.1N H2SO4 kept 2 days at 27.degree., neutralized to pH 7 with Ba(OH)2, and evapd. in vacuo, the powd. residue extd. continually with MeOH, and the ext. concd. in vacuo at 27.degree. to incipient crystn., heated to boiling, and dild. with petr. ether yielded 37% O,O-di-Et O-(5'-adenosyl) thionophosphate, m. 178-80.degree. (from EtOH), [.alpha.]D23 -15.1.degree. (c 2.15, 5% HCl). 2',3'-Isopropylideneadenosine (6.15 g.), 0.02 mole Me3COK, and 4.95 g. I gave in the usual manner oily O-Ph O-(2',3'-isopropylidene-5'-adenosyl) phosphorodiethylamidate (IV); picrate monohydrate, yellow, m. 141-3.degree. (from EtOH). Similarly was prepd. the O-Et analog (V) of IV, glass; picrate hemihydrate, yellow, m. 169-70.degree. with softening at 160.degree. (from EtOH). Crude V hydrolyzed with dil. H2SO4 in the usual manner gave O-Et O-(5'-adenosyl) phosphorodiethylamidate, glass; yellow picrate, m. 138-40.degree. with sintering at 125.degree. (decompn.) (from hot H2O).

IT **86529-23-9**, Adenosine, 2',3'-O-isopropylidene-, 5'-(benzyl phosphorochloridate)
(derivs.)

RN 86529-23-9 HCAPLUS

CN Adenosine, 2',3'-O-(1-methylethylidene)-, 5'-(phenylmethyl phosphorochloridate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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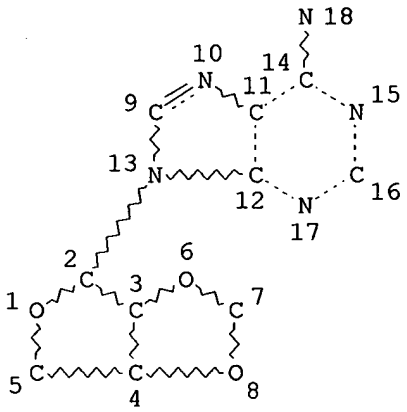


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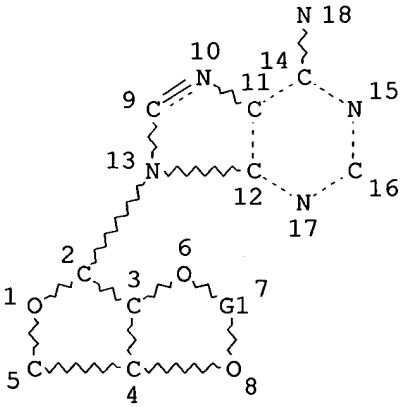


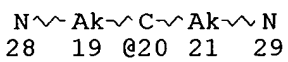


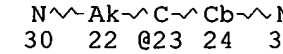


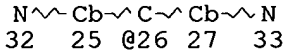


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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  33

STEREO ATTRIBUTES: NONE
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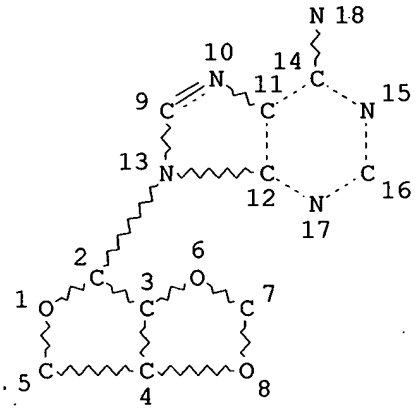

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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  18

STEREO ATTRIBUTES: NONE
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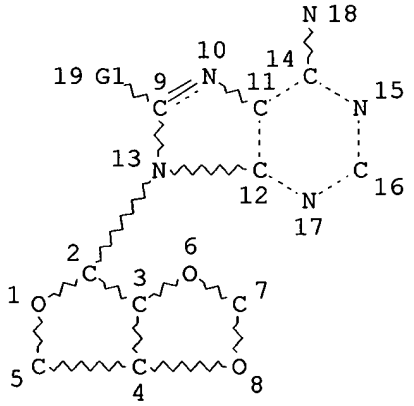

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  19
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STEREO ATTRIBUTES: NONE
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L33 67 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

Only a few Refs printed

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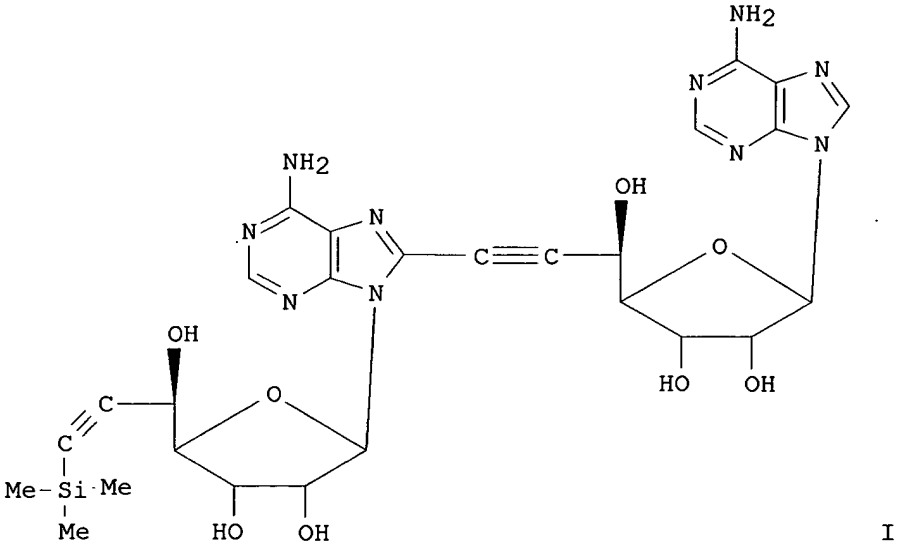
L33 ANSWER 1 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:284191 HCAPLUS
DOCUMENT NUMBER: 137:79168
TITLE: Oligonucleosides with a nucleobase-including backbone, Part 7, syn and anti conformations of a (5'-8)-ethynediyl-linked adenosine dimer
AUTHOR(S): Bhardwaj, Punit Kumar; Vasella, Andrea
CORPORATE SOURCE: Laboratorium fur Organische Chemie, ETH-Honggerberg, HCI, Zurich, CH-8093, Switz.
SOURCE: Helvetica Chimica Acta (2002), 85(3), 699-711
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:79168
GI




I

AB The conformational anal. of (I) was carried out in (D6)DMSO and in mixts. of (D6)DMSO and CDCl3 to evaluate the syn/anti conformations, relevant to the pairing propensity of this type of nucleotide analog. The HO-C(5') of (right) unit a and of (left) unit b of I form an intramol. H-bond to N(3). In (D6)DMSO, the C(5')-OH...N(3) H-bond in unit a is partially broken, while that in unit b persists to a larger extent. The syn conformation prevails for unit a and particularly for unit b. The furanosyl moieties adopt predominantly a 2'-endo conformation that is largely independent of

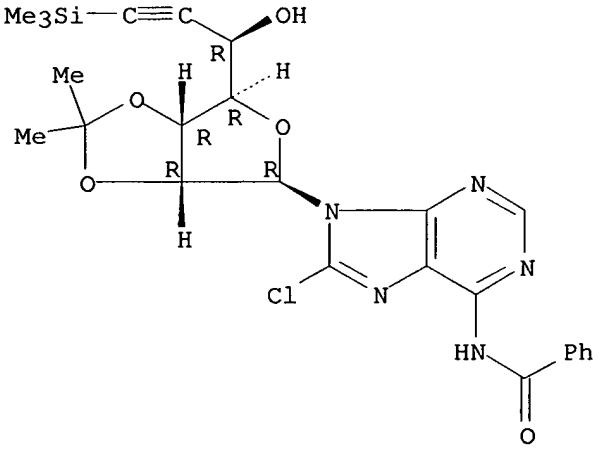
the solvent.

IT **292642-48-9**
RL: MSC (Miscellaneous)
(model compds. for the conformational anal. of (5'-8)-ethynediyl-linked adenosine dimer and the effects of intramol. hydrogen bonds)

RN 292642-48-9 HCAPLUS

CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-7-(trimethylsilyl)-.beta.-D-allo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).




REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 2 OF 67 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:48526 HCAPLUS

DOCUMENT NUMBER: 134:208043

TITLE: Oligonucleosides with a nucleobase-including backbone-part 4: a convergent synthesis of ethynediyl-linked adenosine tetramers

AUTHOR(S): Gunji, Hiroki; Vasella, Andrea

CORPORATE SOURCE: Laboratorium fur Organische Chemie, ETH-Zentrum, Zurich, CH-8092, Switz.

SOURCE: Helvetica Chimica Acta (2000), 83(12), 3229-3245
CODEN: HCACAV; ISSN: 0018-019X

PUBLISHER: Verlag Helvetica Chimica Acta

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:208043

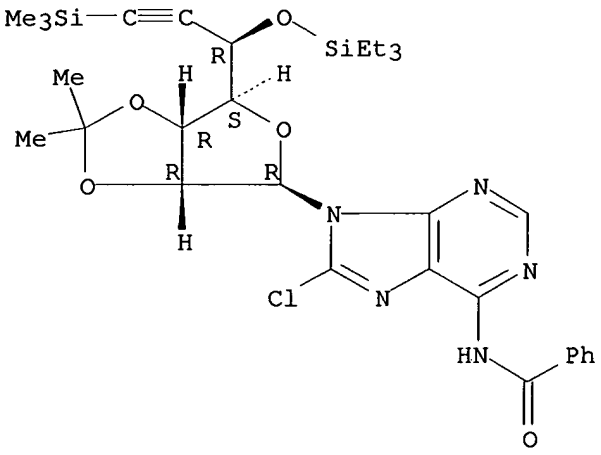
AB Ethynediyl-linked adenosine tetramer oligoribonucleosides were prepd. via iodination, 1,3-dipolar cycloaddn., and coupling of iodinated dimer with alkyne nucleosides. There is no UV evidence for a base-base interaction in the protected and deprotected dimers and tetramers.

IT **292642-52-5 292642-53-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of ethynediyl-linked adenosine tetramer oligonucleosides via iodination, 1,3-dipolar cycloaddn., and coupling reactions)

RN 292642-52-5 HCAPLUS

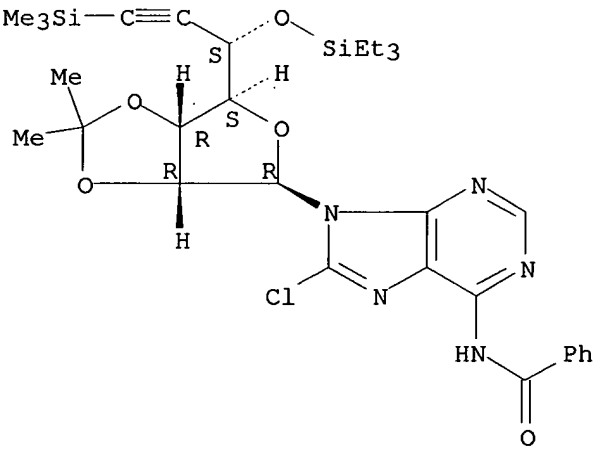
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-5-O-(triethylsilyl)-7-(trimethylsilyl)-.beta.-D-allo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 292642-53-6 HCAPLUS
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-5-O-(triethylsilyl)-7-(trimethylsilyl)-.alpha.-L-talo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

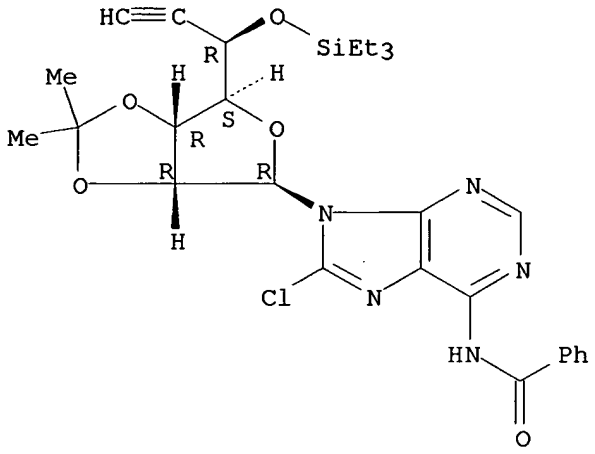
Absolute stereochemistry. Rotation (-).



IT **328241-11-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of ethynediyl-linked adenosine tetramer oligonucleosides via iodination, 1,3-dipolar cycloaddn., and coupling reactions)
RN 328241-11-8 HCAPLUS
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-5-O-(triethylsilyl)-.beta.-D-allo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI)

(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 3 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:502875 HCAPLUS
DOCUMENT NUMBER: 133:238228
TITLE: Oligonucleosides with a nucleobase-including backbone part 2 synthesis and structure determination of adenosine-derived monomers
AUTHOR(S): Gunji, Hiroki; Vasella, Andrea
CORPORATE SOURCE: Laboratorium fur Organische Chemie, ETH-Zentrum, Zurich, CH-8092, Switz.
SOURCE: Helvetica Chimica Acta (2000), 83(7), 1331-1345
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:238228
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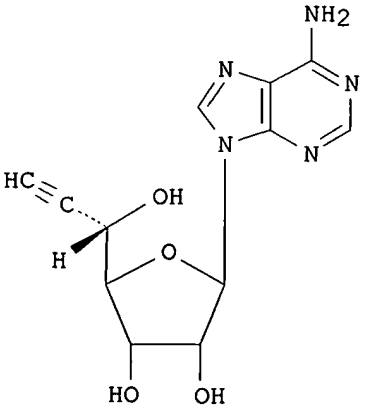

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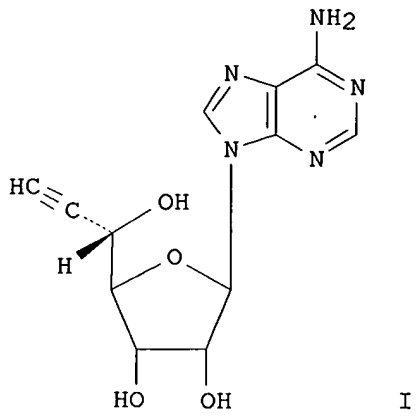


I

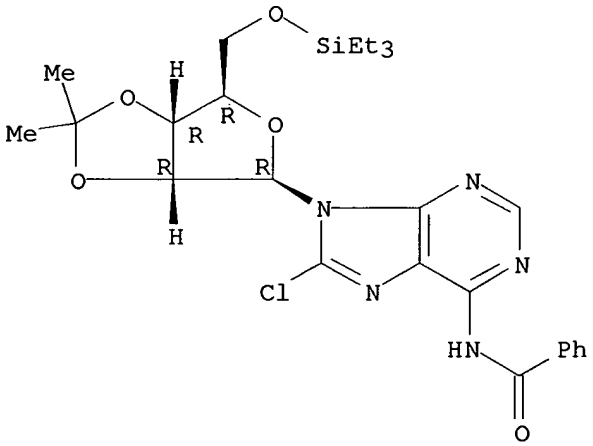
AB The synthesis and structure detn. of adenosine-derived monomeric, e.g. I, building blocks for new oligonucleotides via addn. of propargylic silyl ethers with partially protected adenosine, are described.

IT **292642-44-5P 292642-45-6P 292642-48-9P**
**292642-49-0P 292642-52-5P 292642-53-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and structure detn. of adenosine-derived monomers via addn. of propargylic silyl ethers with partially protected adenosines)

RN 292642-44-5 HCAPLUS

CN Adenosine, N-benzoyl-8-chloro-2',3'-O-(1-methylethylidene)-5'-O-(triethylsilyl)- (9CI) (CA INDEX NAME)

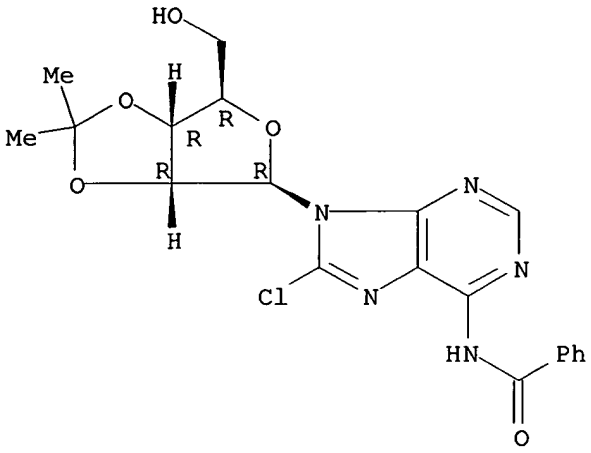
Absolute stereochemistry. Rotation (-).



RN 292642-45-6 HCAPLUS

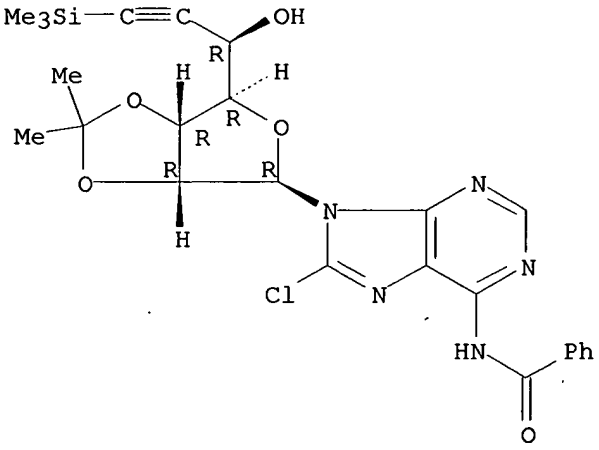
CN Adenosine, N-benzoyl-8-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



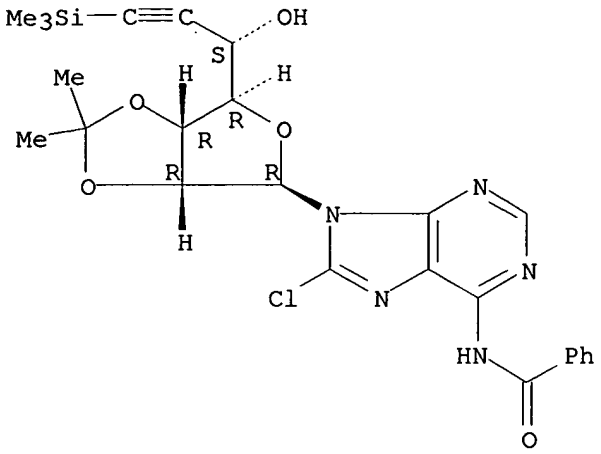
RN 292642-48-9 HCAPLUS
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-7-(trimethylsilyl)-.beta.-D-allo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



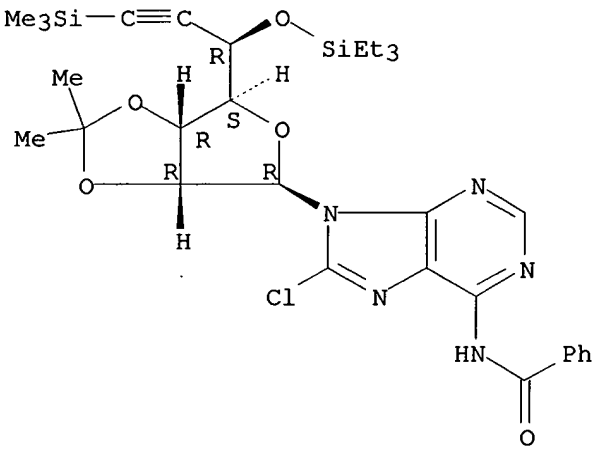
RN 292642-49-0 HCAPLUS
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-7-(trimethylsilyl)-.alpha.-L-talo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



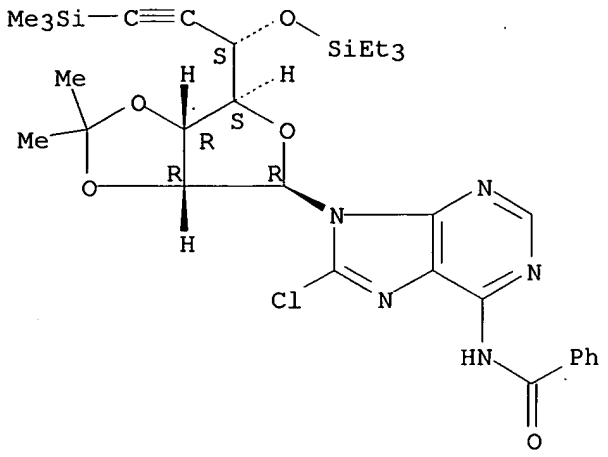
RN 292642-52-5 HCAPLUS
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-5-O-(triethylsilyl)-7-(trimethylsilyl)-.beta.-D-allo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 292642-53-6 HCAPLUS
CN Benzamide, N-[8-chloro-9-[6,7-dideoxy-2,3-O-(1-methylethylidene)-5-O-(triethylsilyl)-7-(trimethylsilyl)-.alpha.-L-talo-hept-6-ynofuranosyl]-9H-purin-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



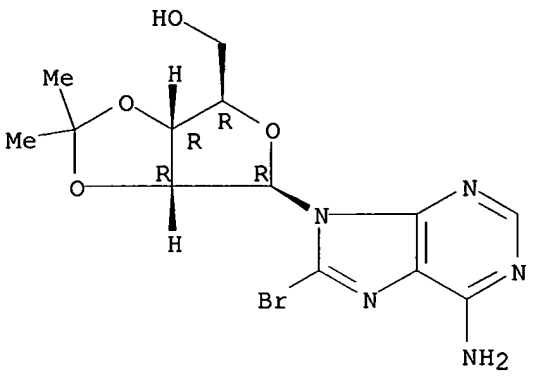
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 45 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:439769 HCAPLUS
DOCUMENT NUMBER: 91:39769
TITLE: Nucleosides and nucleotides. XXVII. Synthesis of 2- and 8-cyanoadenosines and their derivatives
AUTHOR(S): Matsuda, Akira; Nomoto, Yuji; Ueda, Tohru
CORPORATE SOURCE: Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1979), 27(1), 183-92
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English

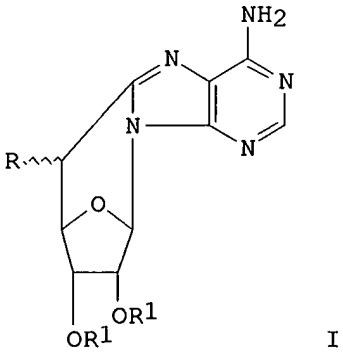
AB A facile displacement of a methylsulfonyl group in adenosines with cyanide ion is described. Treatment of protected 8-(methylsulfonyl)adenosines with NaCN in DMF gave the 8-cyanoadenosine. The conversion of the cyano group to the Me imidate, methoxycarbonyl, carbamoyl, and carboxylic acid was achieved. Similar reaction was carried out with 2-(methylsulfonyl)adenosine to give the 2-cyanoadenosine and their derivs. The NMR and CD spectra of these 2- and 8-substituted adenosines are given. The 8-substituted adenosines possess syn-conformations while the 2-substituted derivs. prefer anti-conformations, as confirmed by the CD and NMR spectra.

IT **13089-45-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylthiolation of)
RN 13089-45-7 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L33 ANSWER 46 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:168903 HCAPLUS
DOCUMENT NUMBER: 90:168903
TITLE: Photochemical cyclization of 2',3'-O-isopropylidene-8-phenylthioadenosine to the 8,5'(R)- and 8,5'(S)-cycloadenosines (nucleosides and nucleotides - XVIII)
AUTHOR(S): Matsuda, A.; Tezuka, M.; Ueda, T.
CORPORATE SOURCE: Fac. Pharm. Sci., Hokkaido Univ., Sapporo, Japan
SOURCE: Tetrahedron (1978), 34(16), 2449-52
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

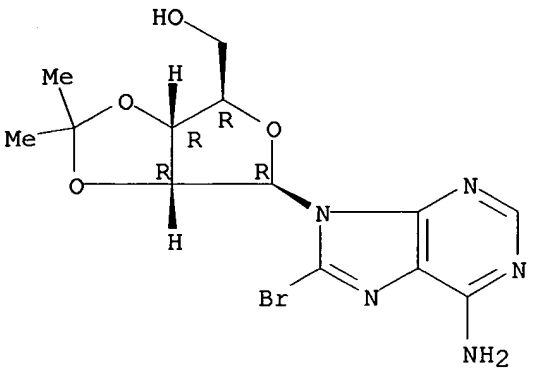
AB 2',3'-O-isopropylidene-8-phenylthioadenosine, prepd. (85.3%) by reaction of 2',3'-O-isopropylidene-8-bromoadenosine with NaSPh in abs. MeOH (60.degree., room temp., overnight), cyclized to cycloadenosines I (R = .alpha.-, .beta.-OH, R12 = CMe2) on irradn. (MeCN, Me3COOH, 4 h). Deacetonation (HCl, 85-90.degree., 1 h) of the latter derivs. gave I (R = .alpha.-, .beta.-OH, R1 = H).

IT **13089-45-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiophenoxylation of)

RN 13089-45-7 HCAPLUS

CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



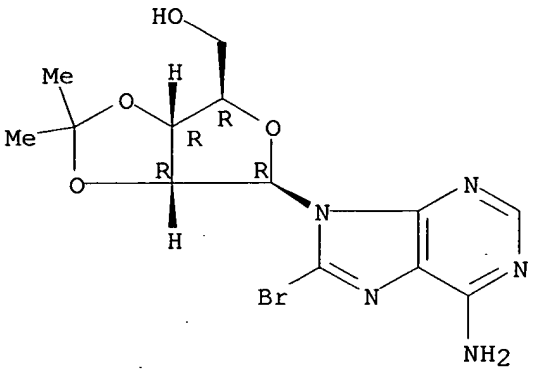

L33 ANSWER 47 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:121924 HCAPLUS
DOCUMENT NUMBER: 90:121924
TITLE: Studies on nucleosides and nucleotides. LXXXI. Carbon-13 magnetic resonance spectra of 8-substituted purine nucleotides. Effects of various phosphate groups on the chemical shifts and conformation of nucleotides
AUTHOR(S): Uesugi, Seiichi; Ikehara, Morio
CORPORATE SOURCE: Fac. Pharm. Sci., Osaka Univ., Suita, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1978), 26(10), 3040-9
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 13C-NMR spectra of 8-substituted purine nucleotides including the 2'-, 3'-, 2',3'-cyclic, 5'- and 3',5'-cyclic phosphates of 8-bromoadenosine and the 5'phosphates of 8-bromoguanosine, 8-methylinosine and 2-methylthio-8-methylinosine. All the 8-substituted nucleotides showed a characteristic upfield shift (-0.9 to -3.7 ppm) of the 2'-C with respect to the corresponding parent nucleotides. These results show that they take a syn conformation in aq. soln. to some extent. It was concluded from consideration of the sugar puckerings in the published PMR data that the 5'-phosphate of 8-bromoadenosine takes a more rigid syn conformation than the 2'-, 3'- and 2', 3'-cyclic phosphates. It is also suggested that 8-bromoadenosine has a flexible glycosidic conformation similar to those for the latter compds. in water while in Me2SO it adopts a more rigid conformation. The 5'-phosphates of the other 8-substituted nucleosides were also assumed to adopt a rigid syn conformation. The influences of various types of phosphate groups on the C chem. shifts are also discussed. Relatively large upfield shifts were obsd. for the C(4') signal of the 8-substituted 5'-nucleotides which has been assumed to be a reflection of a high population of non-gg conformations about the C(4')-C(5') bond.

IT **13089-45-7**
RL: PRP (Properties)
(carbon-13 NMR of)

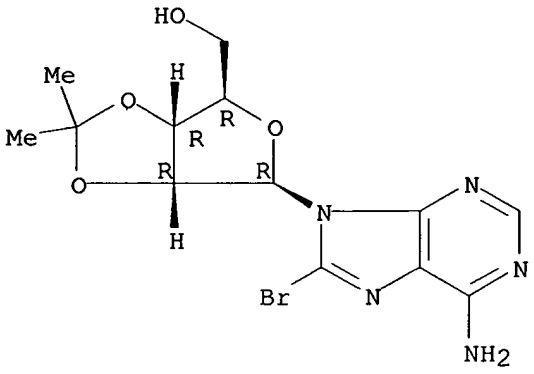
RN 13089-45-7 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



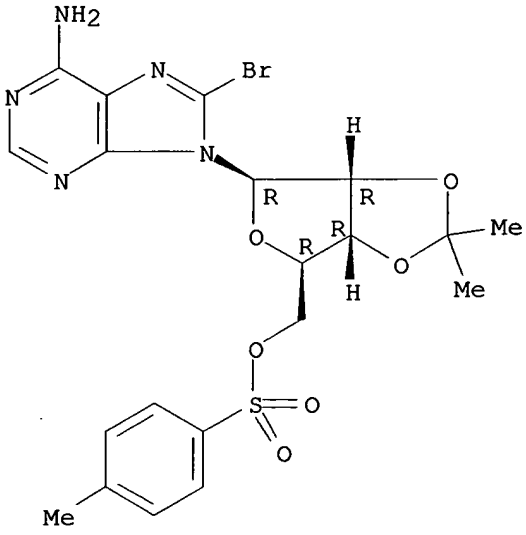

L33 ANSWER 48 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:597854 HCAPLUS
DOCUMENT NUMBER: 89:197854
TITLE: Conformational analysis of 2',3'-O-isopropylidene adenosine derivatives by proton NMR
AUTHOR(S): Gaudemer, Alain; Nief, Francois; Pontikis, Renee; Zylber, Jean
CORPORATE SOURCE: Lab. Chim. Coord. Bioorg., Univ. Paris Sud, Orsay, Fr.
SOURCE: Organic Magnetic Resonance (1977), 10, 135-45
CODEN: ORMRBD; ISSN: 0030-4921
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Conformational anal. using 1H NMR is reported for 36 derivs. of 2',3'-O-isopropylideneadenosine with substituents at C-5', C-8, and N-6. Conformational modifications were assigned to specific interactions between the sugar and purine moieties and to solvent effects.
IT **13089-45-7 20789-78-0**
RL: PRP (Properties)
(conformation of, NMR study of)
RN 13089-45-7 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

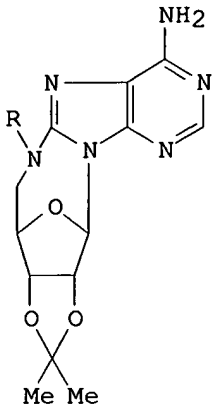


RN 20789-78-0 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)-, 5'-(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

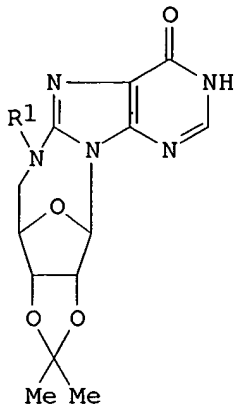
Absolute stereochemistry.



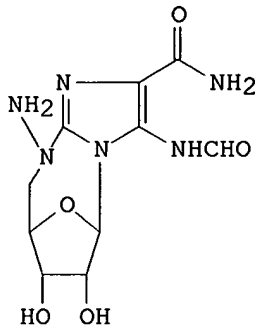
L33 ANSWER 49 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:424683 HCAPLUS
DOCUMENT NUMBER: 89:24683
TITLE: Convenient synthesis of some purine 8,5'-imino cyclonucleosides
AUTHOR(S): Sasaki, Tadashi; Minamoto, Katsumaro; Itoh, Hidemi
CORPORATE SOURCE: Fac. Eng., Nagoya Univ., Nagoya, Japan
SOURCE: Journal of Organic Chemistry (1978), 43(12), 2320-5
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




II




V




VII

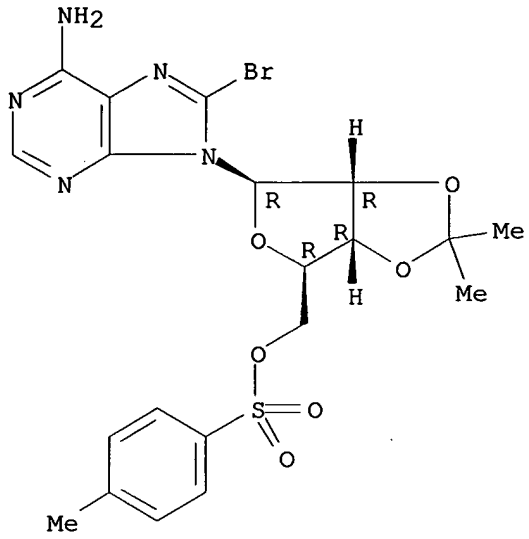
AB Purine 8,5'-imino and aminimino cyclonucleosides were prepd. from 2',3'-O-isopropylidene-5'-O-tosyl-8-bromoadenosine (I) and anhyd. hydrazine. Treating I with anhyd. hydrazine in EtOH gave 8,5'-aminiminoadenine II (R = NH2)(III), which was oxidized to the corresponding 8,5'-imino cyclonucleoside II (R = H)(IV). The N-amino group in III was quant. protected with hot AcOH and phthalic anhydride to give II (R = AcNH,phthalimido). Acidic treatment of III and IV gave the deblocked parent cyclonucleosides, whereas treating II (R = NH2, AcNH, phthalimido) with nitrous acid gave inosine analogs, e.g. V (R1 = phthalimido)(VI). Dephthaloylation of VI with NH2NH2-MeOH gave V (R1 = NH2) as a 1:1 complex with the released phthalizine-1,4-dione, which was deblocked with 90% CF3CO2H. Treating V (R1 = NH2) or its deblocked analog with MeOH-concd. HCl (3:1) gave VII.

IT **20789-78-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrazine)

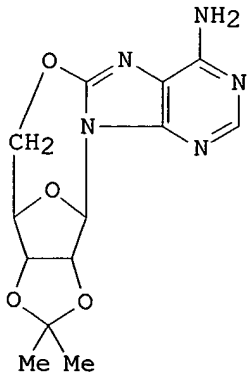
RN 20789-78-0 HCAPLUS

CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)-, 5'-(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L33 ANSWER 50 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1977:90174 HCAPLUS
DOCUMENT NUMBER: 86:90174
TITLE: Synthesis of 8-carbamoyl- and 8-carboxyadenosine 3',5'-cyclic phosphates
AUTHOR(S): Naka, Takehiko; Honjo, Mikio
CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind., Ltd., Osaka, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1976), 24(9), 2052-6
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



III

AB Reaction of 8-bromo-cAMP (cAMP = adenosine 3',5'-cyclic phosphate) (I) with KCN in hot DMF gave 8-carbamoyl-cAMP (II). II was hydrolyzed with aq. NaOH to 8-carboxy-cAMP, which was converted to cAMP by heating in Me2SO. A similar reaction of 8-bromo-5'-AMP or 8-bromo-2',3'-O-

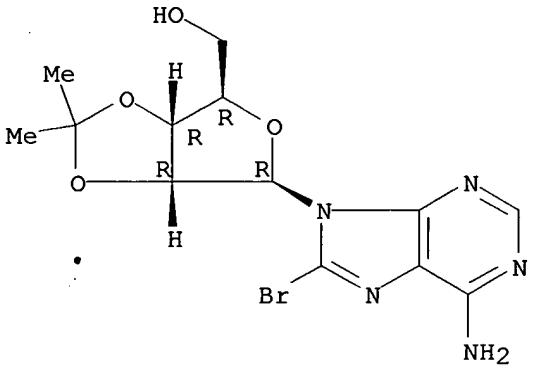
isopropylideneadenosine with KCN in DMF yielded 8-bromoadenosine or 8,5'-anhydro-2',3'-O-isopropylidene-8-hydroxyadenosine (III), resp. Treatment of 5'-nucleotides with hot aq. DMF afforded the corresponding nucleosides.

IT **13089-45-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization of)

RN 13089-45-7 HCAPLUS

CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L33 ANSWER 64 OF 67 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1967:403214 HCAPLUS

DOCUMENT NUMBER: 67:3214

TITLE: Studies of nucleosides and nucleotides. XXXII. Purine cyclonucleosides. 3. Synthesis of 2'-deoxy- and 3'-deoxyadenosine from adenosine

AUTHOR(S): Ikehara, Morio; Tada, Hiroshi

CORPORATE SOURCE: Fac. Pharm. Sci., Univ. Hokkaido, Hokkaido, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1967), 15(1), 94-100
CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

GI For diagram(s), see printed CA Issue.

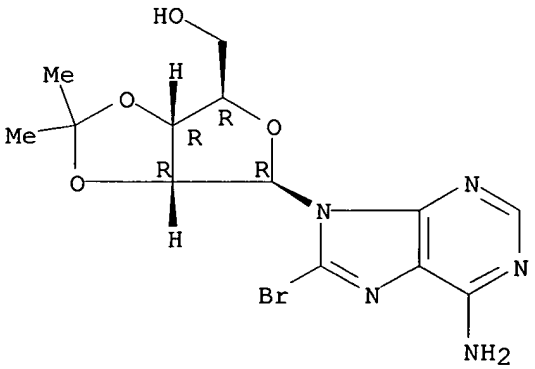
AB cf. CA 63: 2030b; 64: 17700e. A mixt. of 2 g. 2',3'-O-isopropylideneadenosine and 2.2 g. N-bromoacetamide in 20 ml. dry CHCl3 was refluxed 5 hrs., the solvent was removed, and the residue was taken up in 50 ml. EtOAc, washed with 10% NaHSO4, NaHCO3, and water, dried, and distd. to give 1.2 g. 8-bromo-2',3'-O-isopropylideneadenosine (I), m. 215-17.degree. (EtOH). I (1.38 g.) was acetylated with 6 ml. Ac2O in 35 ml. pyridine at room temp. overnight, 20 ml. EtOH was added, and the mixt. was kept at room temp. 2 hrs. to give 1.01 g. 5'-O-acetyl-8-bromo-2',3'-O-isopropylideneadenosine (II), m. 158-60.degree. (EtOH). A mixt. of 4 g. 5'-O-acetyl-2',3'-O-isopropylideneadenosine and 5 g. N-bromoacetamide in 50 ml. CHCl3 was refluxed 6 hrs. and worked up as above to give 3 g. II, m. 155-6.degree. (EtOH). A soln. of 1 g. II in 30 ml. 98% HCO2H was kept at room temp. 20 hrs. under dry conditions, 20 ml. EtOH was added, and the solvent was distd. in vacuo to give 600 mg. 5'-O-acetyl-8-bromoadenosine (III). III (998 mg.) was dried by azeotropic distn. with dry pyridine,

and then in 60 ml. dry pyridine, 499 mg. p-MeC6H4SO2Cl was added with ice cooling, and the stoppered mixt. was refrigerated 60 hrs., worked up dissolved in 20 ml. MeOH satd. with NH3 at 0.degree., and refrigerated for 21 hrs. to give 155 mg. 8-bromo-2'-O-p-tolylsulfonyladenosine (IV), m. 220-3.degree. (decomp.) (50% iso-PrOH). The residue from the mother liquor was recrystd. from 50% iso-PrOH to give a p-tolylsulfonylated mixt. contg. needles, m. 176-7.degree. and granulous crystals, m. 213.degree. (decomp.). A mixt. of 510 mg. IV in 60 ml. BuOH was refluxed with 81.5 mg. thiourea 2 hrs., the solvent was evapd. in vacuo, and the residue in 10 ml. EtOH was chromatographed on 70 g. cellulose powder and eluted with 100 parts BuOH satd. with water and 1 part concd. NH3. Fractions of 10 ml. each were collected. Fractions 11-18 were evapd. to give 167 mg. 8,2'-anhydro-9-.beta.-D-arabinofuranosyl-8-mercaptoadenine (V), m. 191-4.degree. (water), [.alpha.]23.5D -187.2.degree. (c 1.0, H2O). The p-tolylsulfonylated mixt. above (1.67 g.) was refluxed with 277 mg. thiourea in 100 ml. BuOH 2 hrs., the solvent was evapd. in vacuo, and the residue in 10 ml. EtOH was chromatographed on 120 g. cellulose powder and eluted as above. Fractions 12-23 were evapd. to give 8,2'-anhydro-8-mercapto-(3-O-p-tolylsulfonyl-9-.beta.-D-arabinofuranosyl)adenine (VI), m. 196-7.degree. (2:1 EtOH-water), [.alpha.]23D -70.8.degree. (c 0.5, pyridine). Fractions 28-30 were evapd. to give 8,3'-anhydro-8-mercapto-9-.beta.-D-xylofuranosyladenine (VII), colors at 231-2.degree., decompd. at 250.degree.. Fractions 31-4 gave 110 mg. V and a minor component presumably 8-mercapto-2'(or 3')-O-p-tolylsulfonyladenosine. V (210 mg.) was refluxed in 20 ml. water with 1.5 g. Raney Ni 6 hrs., the mixt. was filtered, and the filtrate and washings were evapd. in vacuo to give 2'-deoxyadenosine, m. 187-8.degree.. VII (10 mg.) was refluxed in 10 ml. H2O with Raney Ni for 1 hr. to give 3'-deoxyadenosine (cordycepin). VI (67 mg.) was refluxed in 14 ml. PrOH and 7 ml. water with 500 mg. Raney Ni for 5.5 hrs., the mixt. was filtered, and the filtrate was evapd. in vacuo to give 3'-O-p-tolylsulfonyl-2'-deoxyadenosine, m. 156-70.degree..

IT **13089-45-7P 13089-46-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

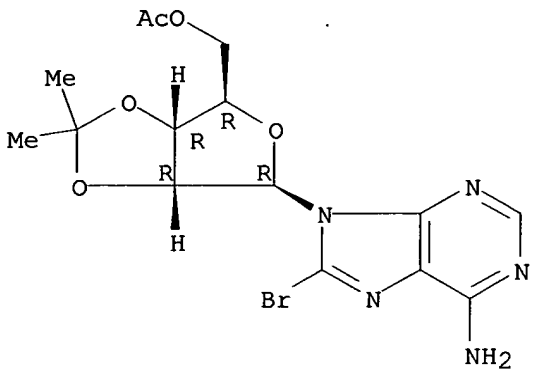
RN 13089-45-7 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 13089-46-8 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-isopropylidene-, 5'-acetate (7CI, 8CI) (CA INDEX NAME)

Absolute stereochemistry.

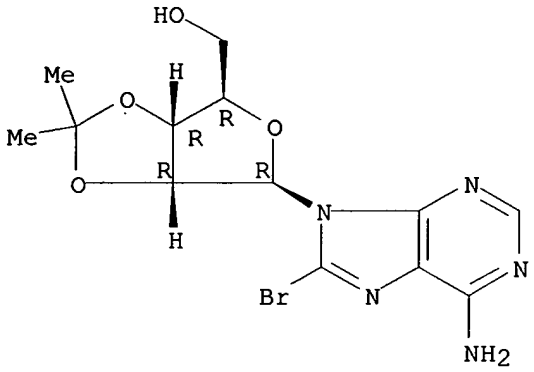



L33 ANSWER 65 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1967:85984 HCAPLUS
DOCUMENT NUMBER: 66:85984
TITLE: Bromination of adenosine nucleosides and nucleotides.
AUTHOR(S): Ikehara, Morio; Uesugi, Seiichi; Kaneko, Masakatsu
CORPORATE SOURCE: Hokkaido Univ., Sapporo, Japan
SOURCE: Chemical Communications (London) (1967), (1), 17-18
CODEN: CCOMA8; ISSN: 0009-241X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A soln. of di-Na adenosine 5'-monophosphate in 0.1N NaOH treated very slowly with 1 mole Br in H2O at room temp., the mixt. kept 7 hrs., adsorbed on a Dowex 1 column (HCO2- form), and eluted with 0.1N HCO2H gave 81% di-Na 8-bromoadenosine 5'-monophosphate. Under similar conditions 100% 8-bromoadenine and 66% 8-bromo-2'-deoxyadenine were obtained from, resp., adenine and 2'-deoxyadenine. 2',3'-O-Isopropylideneadenosine (1 millimole) dissolved in 15 ml. dioxane and 15 ml. 10% Na2HPO4, treated with 1.5 equiv. Br, the mixt. agitated 5 hrs. at room temp., kept overnight, and extd. with CHCl3 gave 80% 8-bromo-2',3'-O-isopropylideneadenosine, m. 224-5.degree..

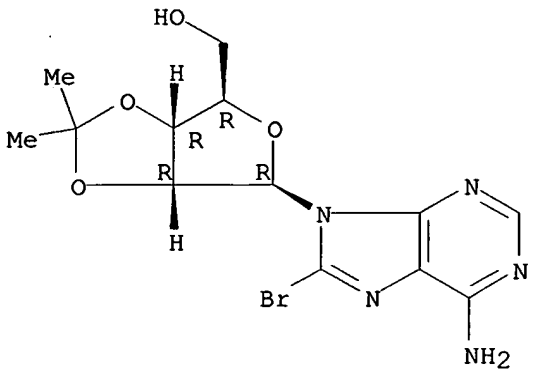
IT **13089-45-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 13089-45-7 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



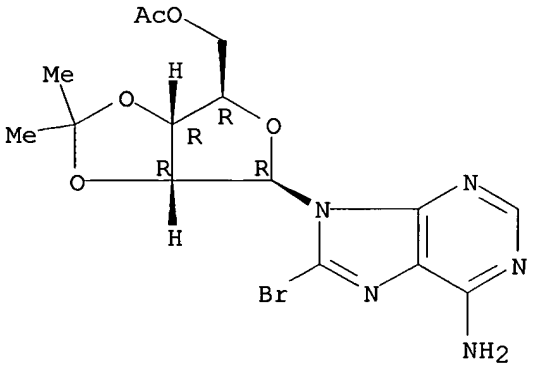
L33 ANSWER 66 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1966:465763 HCAPLUS
DOCUMENT NUMBER: 65:65763
ORIGINAL REFERENCE NO.: 65:12275g-h,12276a
TITLE: Synthesis of purine cyclonucleoside having an 8,2'-O-anhydro linkage
AUTHOR(S): Ikehara, Morio; Tada, Hiroshi; Muneyama, Kei; Kaneko, Masakatsu
CORPORATE SOURCE: Hokkaido Univ., Sapporo, Japan
SOURCE: J. Am. Chem. Soc. (1966), 88(13), 3165-7
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The synthesis of the 1st purine cydonucleoside I having an O-anhydro linkage was reported (CA 62, 13220d). The prepn. involved bromination of 2',3'-O-isopropylideneadenosine to its 8-bromo deriv. (II), acetylation of II to 5'-O-acetyl-8-bromo-2',3'-O-isopropylideneadenosine (III), hydrolysis of III with HCO2H to 5'-O-acetyl-8-bromoadenosine (IV), and p-toluenesulfonation of IV followed by deacetylation, debromination, and desulfonation (use of BzONa in HCONMe2 2 hrs. at 100-5.degree.) to give I, [.alpha.]19D -121.6.degree. (c 0.75, pyridine), which was purified by column chromatography on cellulose. Refluxing I 2 hrs. in 0.1N H2SO4 afforded 9-glycosyl-8-hydroxyadenine and 8-hydroxyadenine, and I treated with BzONa in HCONMe2 in the presence of BzOH gave 9-(2-O benzoyl-.beta.-D-ribofuranosyl)-8-hydroxyadenine.
IT **13089-45-7**, Adenosine, 8-bromo-2',3'-O-isopropylidene-
**13089-46-8**, Adenosine, 8-bromo-2',3'-O-isopropylidene-, 5'-acetate (prepn. of)
RN 13089-45-7 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 13089-46-8 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-isopropylidene-, 5'-acetate (7CI, 8CI) (CA INDEX NAME)

Absolute stereochemistry.



L33 ANSWER 67 OF 67 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1962:60818 HCAPLUS
DOCUMENT NUMBER: 56:60818
ORIGINAL REFERENCE NO.: 56:11692d-g
TITLE: Nucleosides and nucleotides. VI. Synthesis of 9-(5'-deoxy-5'-iodo-.beta.-D-ribofuranosyl)-2,8-dichloroadenine
AUTHOR(S): Kanazawa, Teiichi
CORPORATE SOURCE: Tokyo Inst. Technol.
SOURCE: Nippon Kagaku Zasshi (1960), 81, 1299-302
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB 9-(2',3'-O-Isopropylidene-.beta.-D-ribofuranosyl)-2,8-dichloroadenine (I) (1.45 g.), prepd. by acetonyzing of 2,8-dichloroadenosine, kept with p-toluenesulfonyl chloride in pyridine 1 day gave 1.3 g. 9-(2,3-O-isopropylidene-5-O-p-tolylsulfonyl-.beta.-D-ribofuranosyl)-2,8-dichloroadenine (II) (amorphous). II (1.3 g.) heated with NaI in Me2CO in a sealed tube 1.5 hrs. gave 0.77 g. 9-(2,3-O-isopropylidene-5-deoxy-5-iodo-.beta.-D-ribofuranosyl)-2,8-dichloroadenine (III), m. 172.degree. [.alpha.]25D -23.1.degree. (c 2.25, dioxane), .lambda. 267 m.mu.,

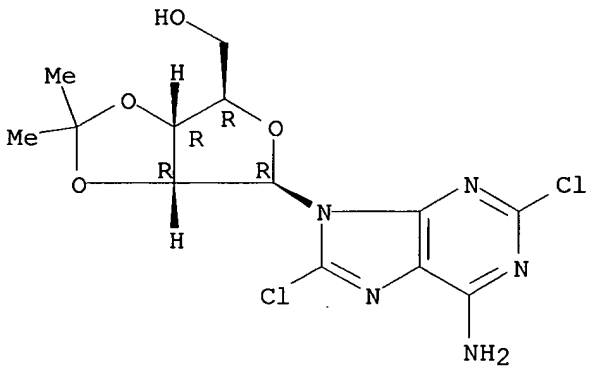
.epsilon. 12,200. III hydrolyzed with HNO3 in dioxane 32 hrs. at 10.degree. thereafter 8 hrs. at 20.degree. gave 85% 9-(5-deoxy-5-iodo-.beta.-D-ribofuranosyl)-2,8-dichloroadenine (IV), m. 175.degree. (decompn.). An EtOH soln. of 13.5 g. HgCl2 was added to a 0.1N NaOH soln. of 10.2 g. 2,8-dichloroadenine (V) contg. Celite, and resulting V HgCl2 salt (VI) with Celite carrier was filtered off and washed. VI treated with 2,3-di-O-acetyl-5-deoxy-5-iodo-D-ribofuranosyl chloride (VII), prepd. from 7.7 g. 1,2,3-tri-O-acetyl-5-deoxy-5-iodo-.beta.-D-ribofuranose (VIII), gave 10 g. 9-(2,3-O-acetyl-5-deoxy-5-iodo-.beta.-D-ribofuranosyl)-2,8-dichloroadenine (IX), m. 183-5.degree.. V (1 g.) reduced with NH3 24 hrs. at 0.degree. in MeOH gave 0.8 g. IV. VII, prepd. from 5 g. VIII, boiled with 8.8 g. VI in xylene and the resulting sirup chromatographed gave 0.8 g. IX and 0.15 g. [2,3-di-O-acetyl-5-deoxy-5-(2,8-dichloroadenyl)-D-ribofuranosyl]-2,8-dichloroadenine (X).

IT **96535-65-8**, Adenosine, 2,8-dichloro-2',3'-O-isopropylidene-
**96984-02-0**, Adenosine, 2,8-dichloro-5'-deoxy-5'-iodo-2',3'-O-isopropylidene- **100000-46-2**, Adenosine, 2,8-dichloro-2',3'-O-isopropylidene-, 5'-p-toluenesulfonate
(prepn. of)

RN 96535-65-8 HCAPLUS

CN Adenosine, 2,8-dichloro-2',3'-O-isopropylidene- (7CI) (CA INDEX NAME)

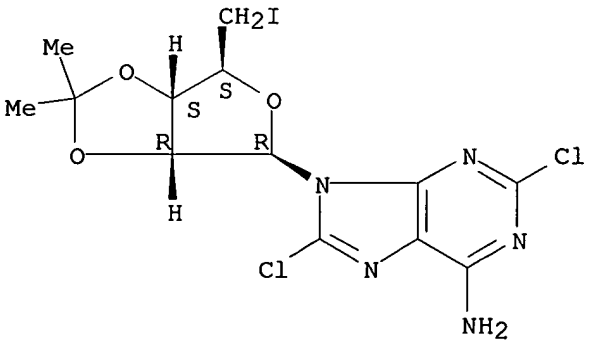
Absolute stereochemistry.

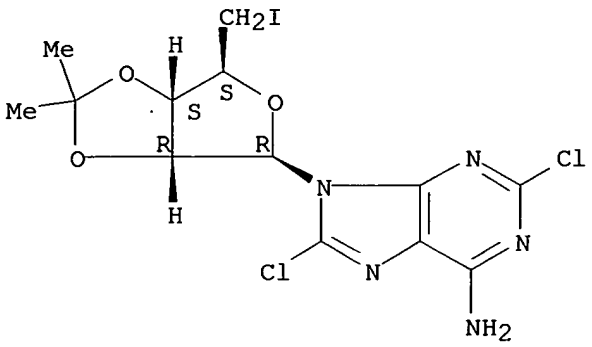



RN 96984-02-0 HCAPLUS

CN Adenosine, 2,8-dichloro-5'-deoxy-5'-iodo-2',3'-O-isopropylidene- (7CI) (CA INDEX NAME)

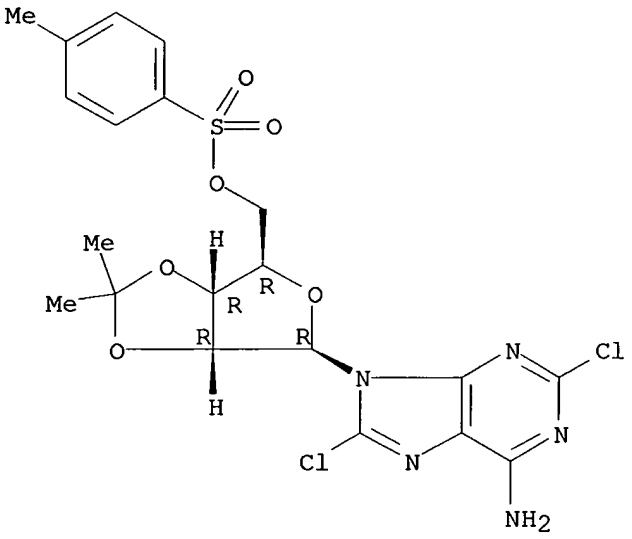
Absolute stereochemistry.





RN 100000-46-2 HCAPLUS
CN Adenosine, 2,8-dichloro-2',3'-O-isopropylidene-, 5'-p-toluenesulfonate (7CI) (CA INDEX NAME)

Absolute stereochemistry.



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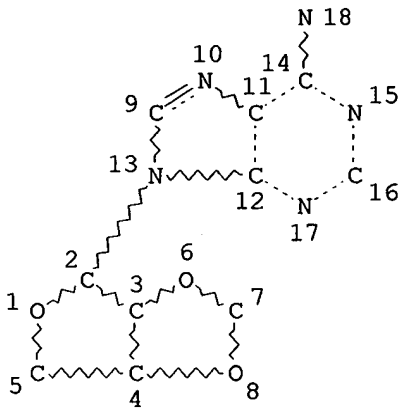

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NSPEC IS RC AT 18
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
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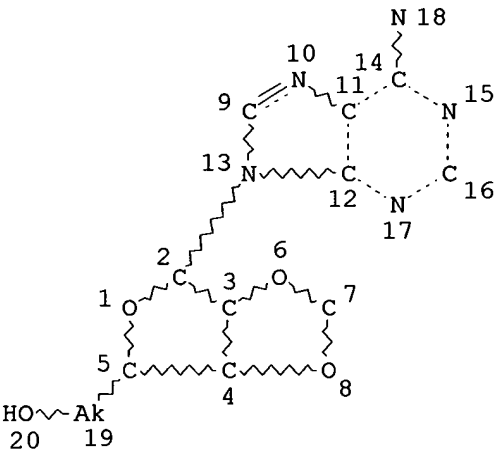
L14 STR



NODE ATTRIBUTES:
NSPEC IS RC AT 18
CONNECT IS E3 RC AT 5
CONNECT IS E2 RC AT 19
DEFAULT MLEVEL IS ATOM
GGCAT IS LOC AT 19
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE
L15 556 SEA FILE=REGISTRY SUB=L2 SSS FUL L14
L34 824 SEA FILE=HCAPLUS ABB=ON PLU=ON L15

only a few Refs printed.

=> d ibib abs hitstr l34 1-3 400-402 821-824

L34 ANSWER 1 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:831353 HCAPLUS
DOCUMENT NUMBER: 138:73419
TITLE: Gel formation properties of a uracil-appended cholesterol gelator and cooperative effects of the complementary nucleobases
AUTHOR(S): Snip, Erwin; Koumoto, Kazuya; Shinkai, Seiji
CORPORATE SOURCE: Chemotransfiguration Project, Japan Science and Technology Corporation (JST), Kurume, Fukuoka, 839-0861, Japan
SOURCE: Tetrahedron (2002), 58(43), 8863-8873
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

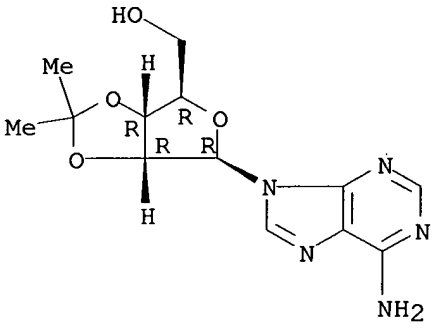
AB The authors designed and synthesized a uracil-appended cholesterol gelator I in order to control the gel stability and the gel morphol. by addn. of the complementary and non-complementary nucleobase derivs. Compd. I forms columnar stacks in cyclohexane due to the van der Waals interaction (cholesterol-cholesterol interaction) and the intergelator hydrogen bonding between uracil moieties. Addn. of a 'monomeric' adenosine, II, into the gel only decreases the stability with increasing the concn. The destabilization is ascribed to a lack of intergelator hydrogen bonding accompanied with forming the complementary base pairs between I and II. In contrast, addn. of an adenine-appended cholesterol induces a different behavior; with increasing concn. the mixed gel is initially stabilized and then destabilized, giving rise to a max. at the ratio of I/adenine-appended cholesterol = 1:1 for the Tgel plot. One may consider, therefore, that when the additive has a common, column-forming cholesterol moiety, the cholesterol-cholesterol interaction can operate cooperatively with the complementary base pairing. In addn., the gel fiber structure is clearly changed by the addn. of the adenine-appended cholesterol. Taking the fact that there is no report for such an additive effect inducing a structural change with maintaining the gel stability into consideration, the authors' attempt at combining cholesterol columnar stacks with the nucleobase additives provides a new methodol. to control the stability and the morphol. of organogels.

IT **362-75-4**, 2',3'-O-Isopropylidene adenosine
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of uracil-appended cholesterol gelator and effects on gel stability and morphol. using complementary and non-complementary nucleobases)

RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34. ANSWER 2 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:816750 HCAPLUS
DOCUMENT NUMBER: 138:39493
TITLE: Adenosine 5'-O-(1-Boranotriphosphate) Derivatives as Novel P2Y1 Receptor Agonists
AUTHOR(S): Nahum, Victoria; Zuendorf, Gregor; Levesque, Sebastien A.; Beaudoin, Adrien R.; Reiser, Georg; Fischer, Bilha
CORPORATE SOURCE: Department of Chemistry Gonda-Goldschmied Medical Research Center, Bar-Ilan University, Ramat-Gan, 52900, Israel
SOURCE: Journal of Medicinal Chemistry (2002), 45(24), 5384-5396
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:39493

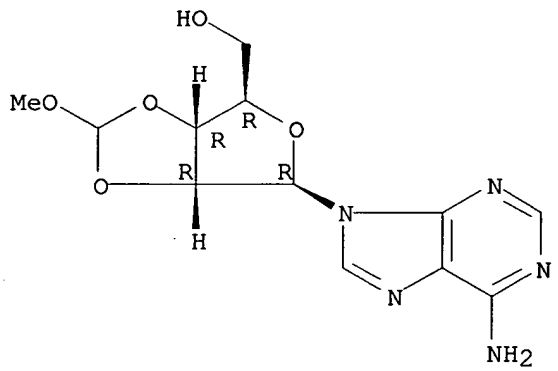
AB P2-receptors (P2-Rs) represent important targets for novel drug development. Most ATP analogs proposed as potential drug candidates have short-comings such as limited receptor-selectivity and limited stability that justify the search for new P2-R agonists. Therefore, a novel series of nucleotides based on the adenosine 5'-O-(1-boranotriphosphate) (ATP-.alpha.-B) scaffold was developed and tested as P2Y1-R agonists. An efficient four-step one-pot synthesis of several ATP-.alpha.-B analogs from the corresponding nucleosides was developed, as well as a facile method for the sepn. of the diastereoisomers (A and B isomers) of the chiral products. The potency of the new analogs as P2Y1-R agonists was evaluated by the agonist-induced Ca2+ release of HEK 293 cells stably transfected with rat-brain P2Y1-R. ATP-.alpha.-B A isomer was equipotent with ATP (EC50 = 2 .times. 10-7 M). However, 2-MeS- and 2-Cl-substitutions on ATP-.alpha.-B (A isomer) increased the potency of the agonist up to 100-fold, with EC50 values of 4.5 .times. 10-9 and 3.6 .times. 10-9 M, compared to that of the ATP-.alpha.-B (A isomer).

Diastereoisomers A of all ATP-.alpha.-B analogs were more potent in inducing Ca2+ release than the corresponding B counterparts, with a 20-fold difference for 2-MeS-ATP-.alpha.-B analogs. The chem. stability of the new P2Y1-R agonists was evaluated by 31P NMR under physiol. and gastric-juice pH values at 37 .degree.C, with rates of hydrolysis of 2-MeS-ATP-.alpha.-B of 1.38 .times. 10-7 s-1 (t1/2 of 1395 h) and 3.24 .times. 10-5 s-1 (t1/2 = 5.9 h), resp. The enzymic stability of the new analogs toward spleen NTPDase was evaluated. Most of the new analogs were poor substrates for the NTPDase, with ATP-.alpha.-B (A isomer) hydrolysis being 5% of the hydrolysis rate of ATP. Diastereoisomers A and B exhibited different stability, with A isomers being significantly more stable, up to 9-fold. Furthermore, A isomers that are potent P2Y1-R agonists barely interact with NTPDase, thus exhibiting protein selectivity. Therefore, on the basis of our findings, the new, highly water-sol., P2Y1-R agonists may be considered as potentially promising drug candidates.

IT **16658-10-9P 478702-40-8P 478702-41-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of adenosine boranotriphosphate derivs. as novel P2Y1 receptor agonists)

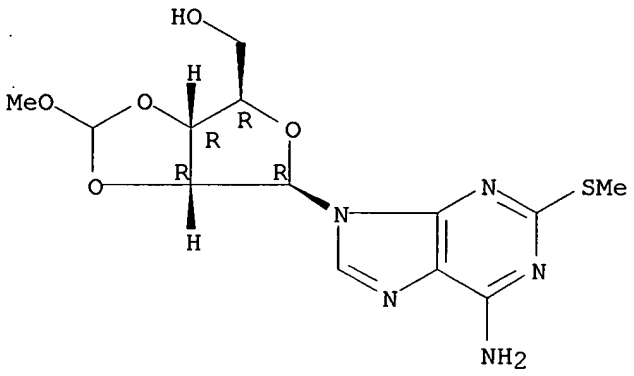
RN 16658-10-9 HCAPLUS
CN Adenosine, 2',3'-O-(methoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



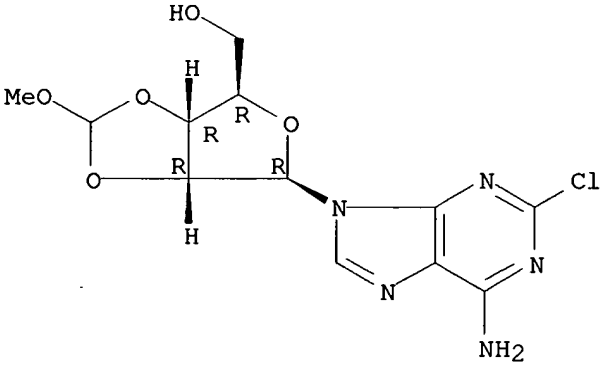

RN 478702-40-8 HCAPLUS
CN Adenosine, 2',3'-O-(methoxymethylene)-2-(methylthio)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 478702-41-9 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(methoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 3 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:789678 HCAPLUS
DOCUMENT NUMBER: 138:24909
TITLE: Synthesis and Evaluation of Analogs of 5'-([(Z)-4-Amino-2-butenyl]methylamino)-5'-deoxyadenosine as Inhibitors of Tumor Cell Growth, Trypanosomal Growth, and HIV-1 Infectivity
AUTHOR(S): Marasco, Canio J., Jr.; Kramer, Debora L.; Miller, John; Porter, Carl W.; Bacchi, Cyrus J.; Rattendi, Donna; Kucera, Louis; Iyer, Nathan; Bernacki, Ralph; Pera, Paula; Sufrin, Janice R.
CORPORATE SOURCE: Grace Cancer Drug Center, Department of Pharmacology and Therapeutics, Roswell Park Cancer Institute, Buffalo, NY, 14263, USA
SOURCE: Journal of Medicinal Chemistry (2002), 45(23), 5112-5122
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

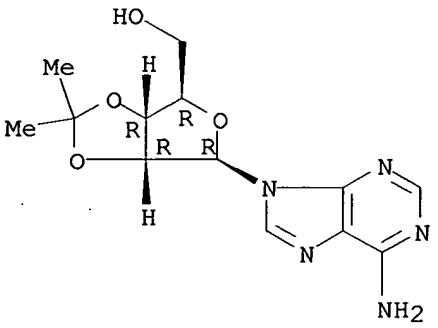
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:24909

AB A well-defined series of 5'-([(Z)-4-amino-2-butenyl]methylamino)-5'-deoxyadenosine analogs was designed and synthesized in order to further ascertain the optimal structural requirements for S-adenosylmethionine decarboxylase inhibition and potentially to augment and perhaps sep. their antiproliferative and antitrypanosomal activities. Most structural modifications had a deleterious affect on both the antitrypanosomal and antineoplastic activity of 5'-([(Z)-4-amino-2-butenyl]methylamino)-5'-deoxyadenosine. However, di-O-acetylation of the parent compd. produced a potential prodrug that caused markedly pronounced inhibition of trypanosomal and neoplastic cell growth and viability. Moreover, the acetylated deriv. of 5'-([(Z)-4-amino-2-butenyl]methylamino)-5'-deoxyadenosine did inhibit HIV-1 growth and infectivity, whereas the parent compd. did not.

IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and evaluation of analogs of aminobutenylmethylaminodeoxyadenosine as inhibitors of tumor cell growth trypanosomal growth and HIV infectivity)

RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

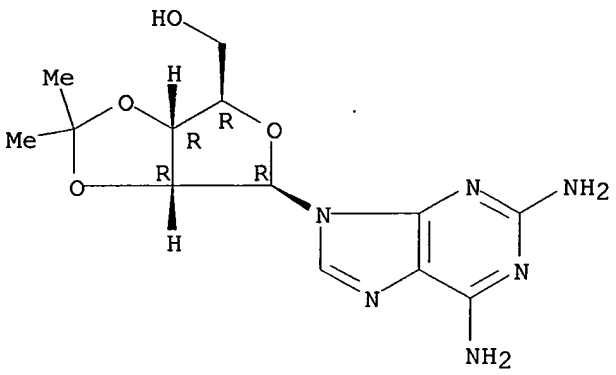
Absolute stereochemistry.




IT **30685-38-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and evaluation of analogs of aminobutenylmethylaminodeoxyadenosine as inhibitors of tumor cell growth trypanosomal growth and HIV infectivity)

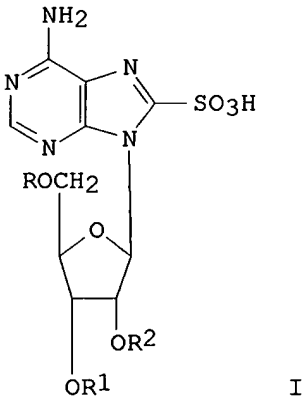
RN 30685-38-2 HCAPLUS
CN Adenosine, 2-amino-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 400 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:95990 HCAPLUS
DOCUMENT NUMBER: 102:95990
TITLE: Synthesis of adenosine 8-sulfonic acid and some of its derivatives
AUTHOR(S): Zavgorodnii, S. G.; Tsilevich, T. L.; Florent'ev, V. L.
CORPORATE SOURCE: Inst. Mol. Biol., Moscow, USSR
SOURCE: Bioorganicheskaya Khimiya (1984), 10(10), 1371-5
CODEN: BIKHD7; ISSN: 0132-3423
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



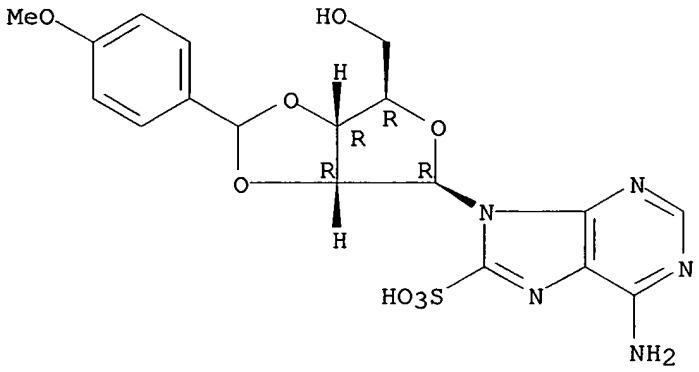
I

AB Adenosinesulfonic acids I [R = H, R1 = R2 = 4-MeOC6H4CH2; R-R2 = H; R = P(O)(OH)2, R1 = R2 = H; R = R2 = H, R1 = P(O)(OH)2; R = R1 = H, R2 = P(O)(OH)2; RR1 = P(O)(OH), R2 = H] were prepd. by treatment of the corresponding C-8 bromo derivs. with Na2SO3. I [R = (OH)2P(O)OP(O)(OH)OP(O)(OH), R1 = R2 = H; R = H, R1R2 = P(O)(OH)] were also prepd., and I possessed syn conformations in soln.

IT **94834-94-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 94834-94-3 HCAPLUS
CN 9H-Purine-8-sulfonic acid, 6-amino-9-[2,3-O-[(4-methoxyphenyl)methylene]-.beta.-D-ribofuranosyl]-, monosodium salt (9CI) (CA INDEX NAME)

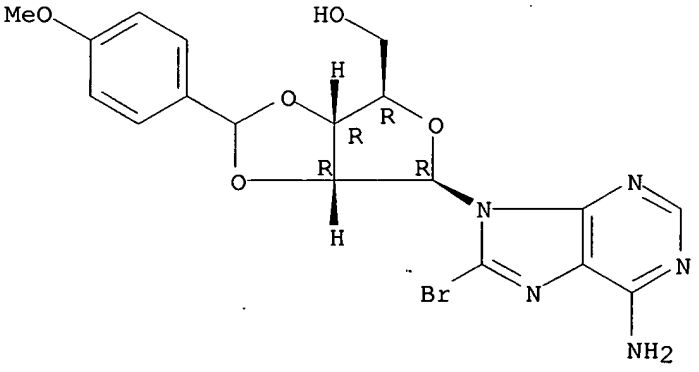
Absolute stereochemistry.




● Na

IT **92890-90-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with sodium sulfite, sulfonic acid derivs. from)
RN 92890-90-9 HCAPLUS
CN Adenosine, 8-bromo-2',3'-O-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L34 ANSWER 401 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:95979 HCAPLUS
DOCUMENT NUMBER: 102:95979
TITLE: Studies on chemical synthesis of antimetabolites. 33.

Studies directed toward the total synthesis of sinefungin. I. Synthesis of 4-(5'-deoxyuridin-5'-yl)-4-nitrobutyronitrile, 4-(5'-deoxyadenosin-5'-yl)-4-nitrobutyramide and closely related nucleosides

AUTHOR(S): Mizuno, Yoshihisa; Tsuchida, Kiyomi; Tampo, Hajime

CORPORATE SOURCE: Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1984), 32(8), 2915-24
CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

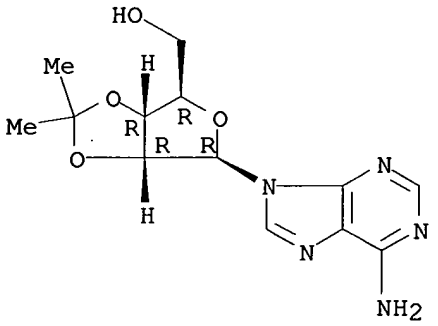
AB The synthesis of 1-(5,6-dideoxy-6-nitro-.beta.-D-ribo-hexofuranosyl)uracil, 9-(5,6-dideoxy-6-nitro-.beta.-D-ribo-hexofuranosyl)adenine, 4-(5'-deoxyuridin-5'-yl)-4-nitrobutyronitrile and 4-(5'-deoxyadenosin-5'-yl)-4-nitrobutyramide from 2',3'-O-isopropylideneuridine-5'-aldehyde (I) was achieved by aldol condensation with MeNO2 or O2N(CH2)3CO2Me, Michael reaction of I with CH2:CHCN or CH2:CHCO2Me, and conversion of the uracil nucleoside into the adenine nucleoside by transglycosylation. The chem. developed for the prepn. of these compds. should be useful in the total synthesis of the nucleoside antibiotics sinefungin and A9145C, which are potent inhibitors of certain S-adenosylmethionine-dependent methyltransferases.

IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. and condensation of, with nitromethane)

RN 362-75-4 HCAPLUS

CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L34 ANSWER 402 OF 824 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1985:46215 HCAPLUS

DOCUMENT NUMBER: 102:46215

TITLE: Cyclonucleoside formation and ring cleavage in the reaction of 2',3'-O-isopropylideneadenosine with benzoyl chloride and its substituted derivatives

AUTHOR(S): Anzai, Kentaro; Uzawa, Jun

CORPORATE SOURCE: Inst. Phys. Chem. Res., Wako, 351, Japan

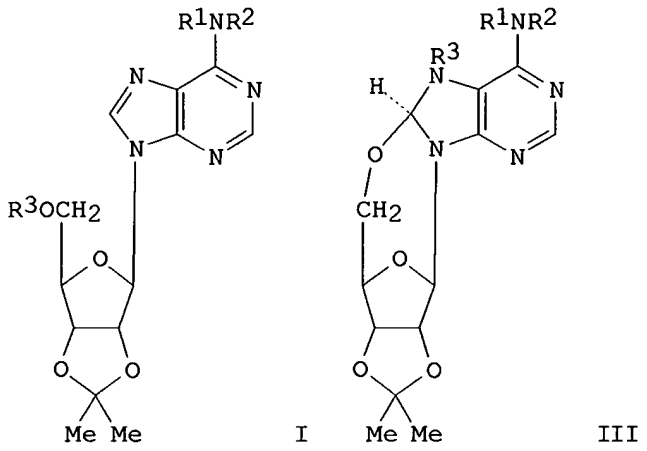
SOURCE: Journal of Organic Chemistry (1984), 49(26), 5076-80
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 102:46215

GI



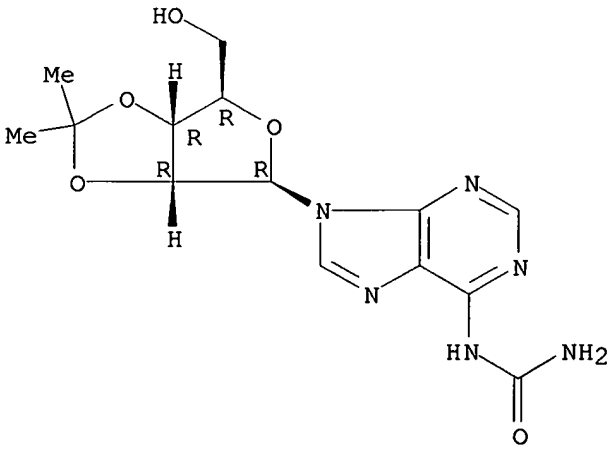

AB Reaction conditions suitable for the formation of 8,5'-O-cycloadenosine derivs. in the reaction of isopropylideneadenosine I (R1 = R2 = R3 = H)(II) BzCl and substituted benzoyl chlorides were investigated. Thus, reaction of II with p-toluoyl chloride in a CH2Cl2-Et3N mixt. afforded 8,5'-O-cyclonucleosides III (R1 = R2 = R3 = p-MeC6H4CO) (34%) and III (R1 = H, R2 = R3 = p-MeC6H4CO) (11%), a noncyclized acylate I (R1 = R2 = R3 = p-MeC6H4CO) (30%), and a ring-cleaved imidazole compd. (12%). The structures of these compds. were detd. by 13C NMR.

IT **93135-59-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 93135-59-2 HCAPLUS

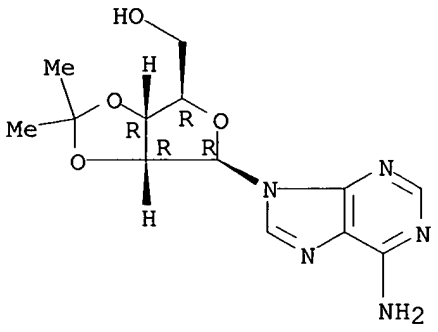
CN Adenosine, N-(aminocarbonyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzoyl chlorides, cyclization in)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

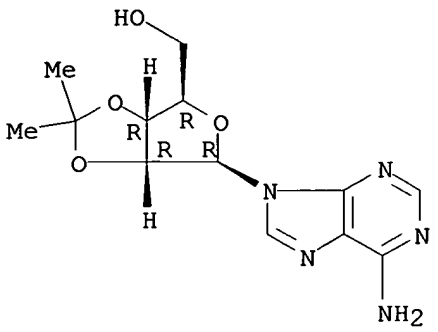
Absolute stereochemistry.



L34 ANSWER 821 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1961:93506 HCAPLUS
DOCUMENT NUMBER: 55:93506
ORIGINAL REFERENCE NO.: 55:17640c-f
TITLE: Synthesis of nucleotide coenzymes and related compounds
AUTHOR(S): Shabarova, Z. A.; Ryabova, T, S.; Prokof'ev, M. A.
CORPORATE SOURCE: M. V. Lomonosov State Univ., Moscow
SOURCE: Doklady Akad. Nauk S.S.S.R. (1961), 136, 1116-19
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 54, 11040h; Moffatt and Kharana, CA 53, 5274b. Me ester of N-(2',3'-isopropylideneadenosine-5'-benzylphos phoro)phenylalanine hydrogenated in EtOH in the presence of Et3N over Pd black gave 70% corresponding phosphate, isolated as the Et3N salt (I), m. 92-4.degree. (decompn.), Rf 0.47 in satd. aq. BuOH. Stirring Ba ribose 5-phosphate with ion exchange resin KU-2 (H-form) in H2O gave after neutralization with Bu3N, tributylammonium ribose 5-phosphate (II); similarly were prepd. tributylammonium glucose 6-phosphate (IIA) and tributylamine salts of H3PO4 and H4P2O7. I treated with HCl in dioxane, the mixt. filtered, treated with a pyridine soln. of II, kept 3 days at room temp., and chromatographed in 96% EtOH-0.5M NH4OAc gave spots, of which one was caused by 2',3'-isopropylideneadenosine 5'-diphosphoribose (III), while the 2nd spot was of lower Rf. This was eluted and refluxed briefly with 0.01N HCl and again chromatographed, showing spots indicative of adenosine, ribose, adenosine diphosphate, and adenosine 5'-phosphate. Yield of III was estd. at 25%. I similarly treated with IIA 3 days gave 37% (estd.) 2',3'-isopropylideneadenosine 5'-diphosphoglucose (Rf 0.47 in 96% EtOH-0.5M NH4OAc), along with the adenosine 5'-monophosphate. Similarly, I and Bu3N phosphate or pyrophosphate gave 27-39% isopropylideneadenosine di- and triphosphates, detected electrophoretically.
IT **362-75-4**, Adenosine, 2',3'-O-isopropylidene-
(phosphates)
RN 362-75-4 HCAPLUS

CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 822 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1961:93503 HCAPLUS
DOCUMENT NUMBER: 55:93503
ORIGINAL REFERENCE NO.: 55:17637i,17638a-i,17639a-d
TITLE: High-energy phosphates. X. The preparation of triesters of pyrophosphoric acid and their use in the synthesis of nucleotide derivatives
AUTHOR(S): Cramer, Friedrich; Wittmann, Rolf
CORPORATE SOURCE: Univ. Heidelberg, Germany
SOURCE: Chem. Ber. (1961), 94, 328-37
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Triesters of pyrophosphoric acid, obtainable from (EtO)2P(O)OC(OEt):CHCO2Et (I) and monoesters of H3PO4, react with amines, alcs., and acid anions with the transfer of the monoester moiety. P1-(15-Adenosyl) P2-diethyl pyrophosphate (II) behaved as an activated adenosinephosphoric acid and transferred the nucleotide residue to bases, alcs., and acids. PhOP(O)(OH)2 (III) (0.348 g.) and 1.48 g. I in 10 cc. Et2O kept 1 hr. at 20.degree., treated with 5 cc. CHCl3 and 3 cc. cyclohexylamine, filtered after 24 hrs. from 0.087 g. bis(cyclohexylammonium) salt of [(PhO)P(O)(OH)]2O, concd. to 5 cc., and treated with petr. ether gave 0.518 g. cyclohexylamine salt (IV) of the cyclohexylamide of III, m. 192-3.degree. (CHCl3-petr. ether). III treated in the usual manner with I, the resulting triester treated after 1 hr. with cooling with dry NH3, and filtered, the residue washed with dry Et2O and dissolved in MeOH, and the soln. treated with a small amt. of cyclohexylamine, filtered, concd., treated with C, and dild. with Et2O yielded 0.296 g. cyclohexylamine sallt (V) of the amine of III, m. 220-7.degree. (with sintering at 179-84.degree.) resolidifying and remelting at 237-40.degree.. Similar results were obtained with PhNH2 and p-O2NC6H4NH2. II (0.348 g.) and 1.48 g. I in 10 cc. Et2O kept 1 hr. at 20.degree., treated with 3 cc. PhCH2OH and 5 cc. C5H5N, dild. after 48 hrs. with dil. NH4OH and extd. with Et2O, the ext. reextd. with NH4OH, the aq. phase treated with 2 cc. cyclohexylamine, concd. at 45.degree. with occasional removal of the ppt. by filtration, the resulting sirup dissolved in 50 cc. CHCl3, the soln. washed with H2O, combined with the original filter residue, dissolved in Me2CO, and dild. with petr. ether yielded 0.562 g. cyclohexylamine salt of PhCH2O(PhO)P(O)OH, m. 147-9.degree. (repptd. from CHCl3-Me2CO with petr. ether). The triester

fron III and I treated 48 hrs. at 50.degree. with 0.74 g. BuOH in 4 cc. C5H5N, concd., treated with 2 cc. cyclohexylamine and 30 cc. H2O, and worked up yielded 0.509 g. cyclohexylamine salt of PhO(BuO)P(O)OH (VI), m. 110-11.degree. (Me2CO-CHCl3-petr. ether). Similar results were obtained with iso-PrOH and p-O2NC6H4CH2OH. III (0.348 g.) in 10 cc. dry Et2O treated with 1.480 g. I and after 1 hr. at 20.degree. with 0.10 g. isopropylidenadenosine (from adenosine and Me2CO with ZnCl2), kept 48 hrs. at 20.degree. and 6 hrs. at 40.degree., concd. in vacuo at 45.degree., dissolved in a little dil. NH4OH, washed with Et2O, treated with 1 cc. cyclohexylamine, concd. in vacuo at 40.degree., dissolved in Me2CO, filtered, treated with 20 cc. H2O, washed with CHCl3, and evapd. in vacuo, and the residue repptd. several times from Me2CO with petr. ether yielded 0.096 g. Ph isopropylideneadenosine-5'-phosphate (VII), m. 210-12.degree.. Anhyd. H3PO4 (0.196 g.), 0.404 g. Et3N, 5 cc. PhCH2OH, and 1.48 g. I kept 48 hrs. at 40.degree., dild. with 20 cc. Et2O and extd. with dil. NH4OH, and ext. passed through a column of Amberlite IR-120 in NH4OH, the eluate evapd., the residue extd. with 98% EtOH, the ext. concd. and dild. with Me2CO, the ppt. dissolved in 3N H2SO4 and extd. with Et2O, and the ext. treated with excess cyclohexylamine gave 0.352 g. salt of PhCH2OP(O)(OH)2, m. 232-5.degree.. Anhyd. H3PO4 (0.196 g.) in 10 cc. PhCH2OH and 2.96 g. I kept 72 hrs. at 40.degree., dild. with 20 cc. Et2O and extd. with dil. NH4OH, and the ext. treated with cooling with 3N H2SO4 yielded 0.268 g. (PhO)2P(O)OH, m. 78.degree.. III (0.348 g.) in 2 cc. C5H5N and 0.74 g. I kept 48 hrs. at 40.degree., dild. with 50 cc. H2O, and treated with 2 cc. cyclohexylamine gave 0.38 g. bis(cyclohexylamine) salt (VIII) of [(PhO)(HO)P(O)]2O, m. 255-8.degree. (cor.) (H2O). Similarly were prepd. the bis(cyclohexylamine) salt (IX) of [(p-ClC6H4O)(HO)P(O)]2O, m. 276-9.degree. (cor.), and the bis(cyclohexylamine) salt (X) of [(p-MeC6H4O)(HO)P(O)]2O, m. 270-3.degree. (cor.), in 73.8 and 78.4% yield, resp. The triester from III and I treated after 1 hr. with 50 cc. Et2O and with cooling with 0.428 g. 2,6-lutidine, the Et2O phase decanted after 10 min., the residue washed with cold Et2O, treated with 0.832 g. p-ClC6H4OP(O)(OH)2 in 5 cc. C5H5N, kept 6 hrs. at 40.degree., and evapd. in vacuo, and the residue dissolved in H2O, passed through Amberlite IR-120, and added to aq. cyclohexylamine gave 0.415 g. bis(cyclohexylamine) salt (XI) of p-ClC6H4O(HO)P(O)OP(O)(OH)OPh, m. 262.degree. (cor.) (aq. EtOH-C5H5N). (EtO)2P(O)(OPh)OH and H3PO4 gave similarly PhO(HO)P(O)OP(O)(OH)2 (XII). III (0.348 g.) in 10 cc. Et2O and 1.48 g. I kept 1 hr. at 20.degree., treated with 2.44 g. BzOH in 15 cc. C5H5H, kept 14 hrs. at 40.degree., and evapd. in vacuo, the residue dissolved in 20 cc. H2O, washed with 20 cc. Et2O, stirred 3 hrs. with 2 cc. PhNH2, and extd. with Et2O gave 0.137 g. (PhO)(BzO)P(O)OH, m. 161.degree.. Adenosine-5'-phosphoric acid (0.694 g.), 0.74 g. Bu3N, and 0.296 g. I in 20 cc. dry HCONMe2 stirred 2-3 hrs. at 20.degree., dild. with about 150 cc. dry Me2CO, treated with 0.6 g. NaI in Me2CO, and centrifuged gave 0.912 g. Na salt (XIII) of II.H2O. XIII (0.261 g.) in 2 cc. abs. MeOH and 1 cc. dry C5H5N kept 3 hrs. at 50.degree., concd., chromatographed (descending) 16 hrs. with 7:1:2 iso-PrOH-NH3-H2O (solvent A) on Whatman 3MM paper, the band, Rf 0.35, cut out and eluted with 300 cc. MeOH in small portions, and the eluate concd., filtered, dild. with Me2CO and Et2O, and centrifuged yielded 0.157 g. NH4 salt of Me adenosine 5'-phosphate-H2O (XIV). XIII (0.261 g.) in 2 cc. dry HCONMe2 and 0.396 g. cyclohexylamine kept 12 hrs. at 20.degree. and evapd. in vacuo at 35.degree., and the residue chromatographed on paper gave 0.206 g. NH4 salt of adenosine-5'-phosphoric acid cyclohexylamide-4H2O (XV), Rf 0.52. XIII (0.261 g.), 0.87 g. III, 2 cc. HCONMe2, and 2 cc. C5H5N kept 48 hrs. at 20.degree. and evapd. in vacuo at 35.degree., the residue dissolved in

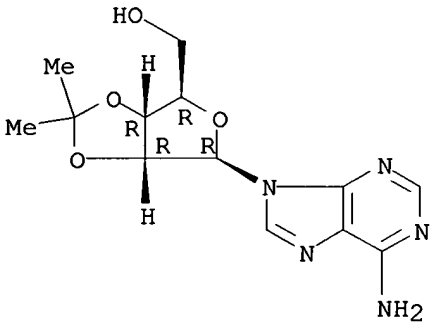
a little H2O, treated with 2 cc. cyclohexylamine, dild. with 200 cc. MeOH and some Me2CO, filtered, and evapd., and the residue chromatographed in the usual manner on paper gave 0.242 g. di-NH4 P1-(5'-adenosyl) P2-phenyl pyrophosphate-5H2O (XVI), Rf 0.36. XIII (0.262 g.) in 2 cc. dry C5H5N, 0.61 g. BzOH, 0.505 g. Et3N, and 1 cc. C5H5N kept 12 hrs. at 40.degree., treated 2 hrs. with 2 cc. PhNH2, and worked up gave 0.034 g. adenosine-5'-phosphoric benzoic anhydride, m. 159-61.degree.. The Rf values with 8:1:1 iso-PrOH-concd. NH4OH-H2O were detd. (descending) for the following compds.: III 0.08, p-ClC6H4OP(O)(OH)2 0.14, p-MeC6H4OP(O)(OH)2 0.09, (EtO)2P(O)OH 0.58, PhCH2O(PhO)P(O)OH 0.73, VI 0.73, p-O2NC6H4O(PhO)P(O)OH 0.69, IV 0.72, benzylamide of III 0.65, anilide of III 0.64, p-nitranilide of III 0.67, V 0.38, VIII 0.42, IX 0.51, X 0.45, XI 0.45, XII 0.02, I, 0.60 and 0.89, isopropylideneadenosine 0.69, VII 0.55. The Rf values with solvent A and with 2:1 iso-PrOH-1% aq. (NH4)2SO4 (given in this order) were detd. for the following compds.: adenosine-5'-phosphoric acid (XVII), 0.10, 0.34; 3'-isomer of XVII, 0.14, 0.43; diadenosyl pyrophosphate, 0.11, 0.25; XIII, 0.22-0.56, 0.62; amide of XVII, 0.22, 0.32; XV, 0.54, 0.68; XIV, 0.35, 0.45; XVI, 0.37, 0.46.

IT **362-75-4**, Adenosine, 2',3'-O-isopropylidene-
(prepn. of)

RN 362-75-4 HCAPLUS

CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L34 ANSWER 823 OF 824 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1959:2115 HCAPLUS

DOCUMENT NUMBER: 53:2115

ORIGINAL REFERENCE NO.: 53:401g-i,402a-g

TITLE: Synthesis of 6-(dimethylamino)-9-(.beta.-D-ribofuranosyl)purine 5'-phosphate

AUTHOR(S): Andrews, K. J. M.; Barber, W. E.

CORPORATE SOURCE: Roche Products Ltd., Welwyn Garden City, UK

SOURCE: J. Chem. Soc. (1958) 2768-71

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

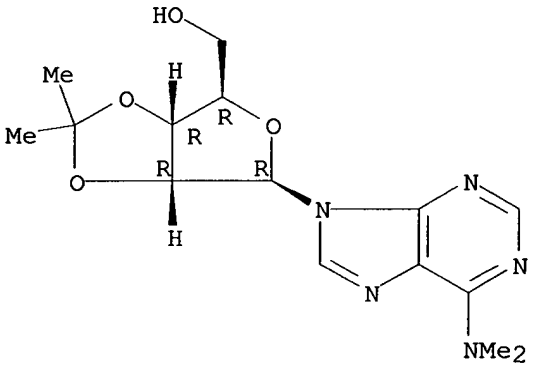
AB To 16 g. 6-(dimethylamino)-2-(methylthio)purine in 100 ml. EtOH was added 38 ml. aq. 2N NaOH followed by 22 g. HgCl2 in 100 ml. EtOH, and the solid filtered off, washed with H2O, EtOH, and Et2O, and dried giving 25 g. HgCl complex (I). I (13.5 g.) and 13.5 g. Hyflo Supercel (IA) in 250 ml. PhCl was distd. to remove half the PhCl (and residual H2O), treated with acetochlororibofuranose (II) [from 12 g. tetra-O-acetyl-.beta.-D-ribofuranose (IIA)] in 100 ml. dry PhCl, stirred and refluxed 3 hrs.,

filtered hot, the insol. material extd. with hot CHCl3 until the exts. were colorless, the combined PhCl-CHCl3 solns. evapd. in vacuo and the residue dissolved in 150 ml. CHCl3, the CHCl3 soln. washed with 2 50-ml. portions 30% aq. KI, then H2O, dried, treated with C, and evapd. in vacuo giving 16.3 g. yellow-brown glass (III). The III in 25 ml. dry MeOH and 200 ml. 5N MeOH-NH3 kept 24 hrs. at room temp. then evapd. in vacuo gave 4.2 g. 6-(dimethylamino)-2-(methylthio)-9-(.beta.-D-ribofuranosyl)purine, m. 174-5.degree. (H2O), [.alpha.]20D -43.6.degree. (c 1.6, MeOH). The III (crude 6-dimethylamino-2-(methylthio)-9-[(2',3',5'-tri-O-acetyl)-.beta.-D-ribofuranosyl]purine from 32 g. I and 28 g. II) in 1.5 l. MeOH and about 80 g. freshly prepd. Raney Ni stirred and refluxed 1 hr., filtered through IA, the filtrate evapd. in vacuo, the residual gum, 300 ml. MeOH, and 3 ml. N MeONa refluxed 1 hr. (pH kept above 8 by adding more MeONa, if necessary), evapd. to dryness, the residue dissolved in a few ml. H2O, the H2O soln. dild. with boiling Me2CO, the Me2CO soln. dild. with boiling Me2CO, the Me2CO soln. evapd. in vacuo, the Me2CO evapns. repeated twice, and the solid product recrystd. from H2O and Me2CO gave 12.1 g. 6-dimethylamino-9-(.beta.-D-ribofuranosyl)purine (IV), fluffy needles, m. 182-3.degree., [.alpha.]20D -58.5.degree. (c 2.3, H2O). IV (9 g.), 450 ml. dry Me2CO, 36 g. anhyd. CuSO4, and 36 g. p-MeC6H4SO3H in 200 ml. Me2CO stirred 0.5 hr., filtered, the insol. washed with Me2CO, the combined filtrate and washings poured into 30 g. anhyd. Na2CO3 in 400 ml. H2O, extd. with CHCl3, and the CHCl3 exts. evapd. in vacuo gave 6.8 g. 6-dimethylamino-9-[(2',3'-O-isopropylidene)-.beta.-D-ribofuranosyl]purine (V), needles, m. 176-7.degree. (EtOH). To 4.07 g. PhCH2P(OH)2 in 33 ml. dry C6H6 was added 4.9 g. Ph2PCl, stirred, 3.33 g. Et3N in 33 ml. dry C6H6 added in 10 min., stirred 1 hr. at room temp., the Et3N.HCl filtered off, the filtrate treated with 5 g. dry V and 2.7 ml. 2,6-lutidine, stirred 0.5 hr. at room temp., filtered, the filtrate evapd. in vacuo at room temp., the residue dissolved in 100 ml. CHCl3, the CHCl3 soln. washed with H2O, satd. aq. NaHCO3, and H2O, dried, and evapd. in vacuo at room temp. giving 7.8 g. crude 6-dimethylamino-9-[(2',3'-O-isopropylidene)-.beta.-D-ribofuranosyl]purine 5'-benzyl H phosphite (VI), pale yellow oil. The VI in 80 ml. dry C6H6 and 2 g. N-chlorosuccinimide was stirred 2 hrs. at room temp., 80 ml. MeCN and 160 ml. satd. aq. NaHCO3 soln. added, stirred 6 hrs., kept 9 hrs., the aq. phase sepd., filtered, and the filtrate freed of residual MeCN by evapn. in vacuo below 30.degree.; half of the residual aq. soln. was cooled in ice H2O, the pH adjusted to about 2 and extd. with CHCl3, the CHCl3 exts. dried, evapd. in vacuo at room temp., the residue (2.2 g.) immediately dissolved in 100 ml. EtOH, 100 ml. H2O added, the soln. treated with C, filtered, the filtrate hydrogenated (2 hrs.) over 0.5 g. PdO2 and 0.5 g. 10% Pd-C, filtered, the filtrate evapd. in vacuo, the residue refluxed 2 min. with 3 ml. H2O to remove the isopropylidene group, cooled, dild. to turbidity with Me2CO, and set aside 3 days at 0.degree. gave 0.5 g. 6-dimethylamino-9-(.beta.-D-ribofuranosyl)purine 5'-phosphate (VIII), m. 225.degree. (decompn.), [.alpha.]20D -51.degree. (c 1.98, H2O), .lambda. 268 m.mu. (.epsilon. 18,300), Rf0.39, ultraviolet absorbent, contains P, developed with PrOH-aq. NH3 (d. 0.88)-H2O(60:30:10). To 10 g. 4,5-diamino-6-(dimethylamino)-2-(methylthio)pyrimidine in 400 ml. 2N AcONa, 25 ml. 2N HCl, and 5 ml. AcOH at 80.degree. was added 20 g. NaNO2 in 200 ml. H2O, kept 0.5 hr. at 95.degree., and cooled giving 9.3 g. 6-(dimethylamino)-2-(methylthio)-8-azapurine (VIII), needles, m. 262.degree.; the VIII HgCl2 complex, prepd. as above (12 g.), and II (from 9.5 g. IIA as above) gave the crude tri-O-acetylribosyl compd. which deacetylated with MeOH-NH3 gave 49.5% 6-(dimethylamino)-2-(methylthio)-9-(.beta.-D-ribofuranosyl)-8-azapurine (IX), m. 146.5-8.degree. (H2O). IX (400 mg.), 100 ml. EtOH, and about 3

g. Raney Ni refluxed 1 hr., filtered through IA, and the filtrate evapd. in vacuo gave 70 mg. 6-(dimethylamino)-9-(.beta.-D-ribofuranosyl)-8-azapurine, m. 216.degree. (aq. EtOH). IV (290 mg.), 37 ml. dry BzH, and 750 mg. ZnCl2 shaken 24 hrs., poured into 50 ml. dry Et2O, the solid filtered off, dissolved in 4.3 ml. EtOCH2CH2OH, the soln. treated with 3.2 ml. 2N aq. NaOH, kept 10 min., filtered, and the filtrate evapd. in vacuo gave 100 mg. 6-(dimethylamino)-9-[(2',3'-O-benzylidene)-.beta.-D-ribofuranosyl]purine, m. 172.degree. (EtOH). IV showed possibly a slight but not appreciable activity against Sarcoma 180; on a molar basis this activity was of the same order as for the purine. The activity of VII is under investigation.

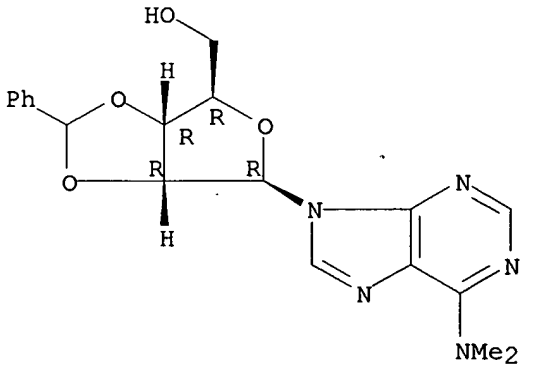
IT **19083-21-7**, Adenosine, 2',3'-O-isopropylidene-N,N-dimethyl- (and derivs.)
RN 19083-21-7 HCAPLUS
CN Adenosine, N,N-dimethyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **110422-67-8**, Adenosine, 2',3'-O-benzylidene-N,N-dimethyl- (prepn. of)
RN 110422-67-8 HCAPLUS
CN Adenosine, 2',3'-O-benzylidene-N,N-dimethyl- (6CI) (CA INDEX NAME)

Absolute stereochemistry.

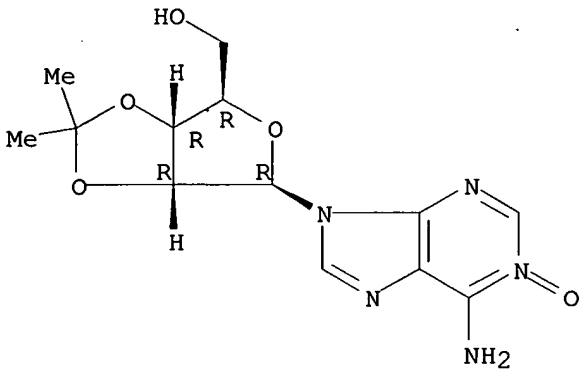


L34 ANSWER 824 OF 824 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1958:113751 HCAPLUS
DOCUMENT NUMBER: 52:113751
ORIGINAL REFERENCE NO.: 52:20177g-i,20178a-b
TITLE: Purine N-oxides. I. Monooxides of aminopurines
AUTHOR(S): Stevens, Marcus A.; Magrath, David I.; Smith, Herman W.; Brown, George Bosworth
CORPORATE SOURCE: Cornell Univ. Med. Coll., New York, NY
SOURCE: J. Am. Chem. Soc. (1958), 80, 2755-8
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB N-Monooxides were isolated from the mixts. resulting from the oxidation of adenine, adenosine, 2',3'-isopropylideneadenosine (I), or 2,6-diaminopurine with $H_2O_2$-AcOH. Adenine (10 g.) in 60 ml. hot AcOH cooled to 20.degree., 37 ml. 30% $H_2O_2$ added, the soln. held at room temp. 4.5 days, and filtered yielded 84% adenine N-oxide (II), decomp. 297-307.degree.. II (250 mg.) in 100 ml. $H_2O$ contg. 1 ml. $NH_4OH$ shaken 6 hrs. with 3 ml. Raney Ni under 1 atm. H yielded 220 mg. adenine, m. 350.degree.. Anhyd. adenosine (10 g.) in 500 ml. AcOH and 50 ml. 30% $H_2O_2$ held 6 days at room temp., cooled in an ice bath, stirred with 4 g. 5% Pd-C, filtered, and the filtrate evapd. to 250 ml. in vacuo, and allowed to evap. yielded 10.8 g. adenosine N-oxide (III), m. 155.degree., decomp. 160.degree.. III (30 mg.) in N HCl refluxed 15 min. yielded II. I (2.0 g.) in 100 ml. AcOH and 10 ml. 30% $H_2O_2$ held 5 days at room temp., stirred 1 day with 0.5 g. 10% Pd-C at 20.degree., filtered, evapd. in vacuo at room temp., the residue in 15 ml. hot EtOH treated with C, cooled, the resulting gel warmed with 10 ml. EtOH, and the soln. cooled slowly yielded 845 mg. 2',3'-isopropylidene N-oxide (IV), m. 176-8.degree. (decompn.). IV (5 mg.) in 2 ml. N HCl boiled 2 min. yielded about 60% II. 2,6-Diaminopurine (V) (410 mg.) in 23 ml. AcOH and 1.8 ml. 30% $H_2O_2$ stirred 3 days at 25-30.degree., the soln. cooled to 0.degree., stirred 1 day at room temp. with 125 mg. 10% Pd-C, filtered, the filtrate evapd. to dryness in vacuo at 25-30.degree., the residue in 10 ml. $H_2O$ dissolved by addn. of $NH_4OH$, the soln. dild. to 2 l., the pH adjusted to 10.8, chromatographed on Dowex-1, and eluted with $NH_4Cl$ yielded 13.5% 2,6-diaminopurine N-oxide (VI). VI (7.5 mg.) hydrogenated over Raney Ni gave V.

IT **5167-12-4**, Adenosine, 2',3'-O-isopropylidene-, 1-oxide
(prepn. of)
RN 5167-12-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)-, 1-oxide (9CI) (CA INDEX NAME)

Absolute stereochemistry.


HO
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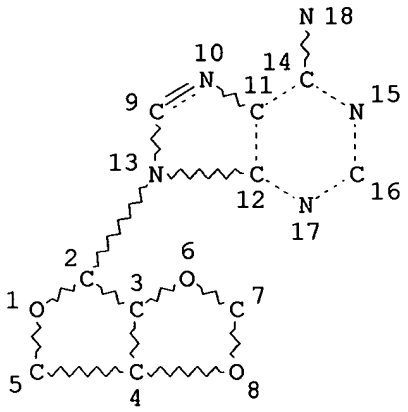
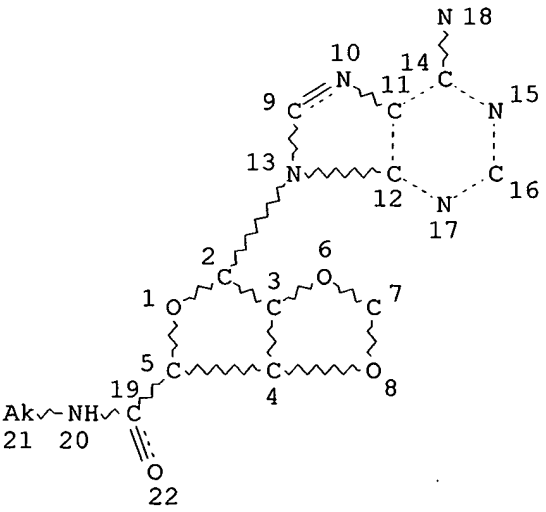


NODE ATTRIBUTES:
NSPEC IS RC AT 18
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
L2 3214 SEA FILE=REGISTRY SSS FUL L1
L18 STR



NODE ATTRIBUTES:
NSPEC IS RC AT 18
CONNECT IS E3 RC AT 5
CONNECT IS E1 RC AT 21
DEFAULT MLEVEL IS ATOM
GGCAT IS LOC AT 21

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE
L19 246 SEA FILE=REGISTRY SUB=L2 SSS FUL L18
L35 63 SEA FILE=HCAPLUS ABB=ON PLU=ON L19

only a few Refs. Printed

=> d ibib abs hitstr l35 1-3 40-45 60-63

L35 ANSWER 1 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:271942 HCAPLUS
DOCUMENT NUMBER: 136:291358
TITLE: Diagnostic uses of 2-substituted adenosine carboxamides
INVENTOR(S): Leung, Edward
PATENT ASSIGNEE(S): King Pharmaceuticals Research and Development, Inc., USA
SOURCE: U.S., 17 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6368573 | B1 | 20020409 | US 1999-440330 | 19991115 |

PRIORITY APPLN. INFO.: US 1999-440330 19991115
OTHER SOURCE(S): MARPAT 136:291358

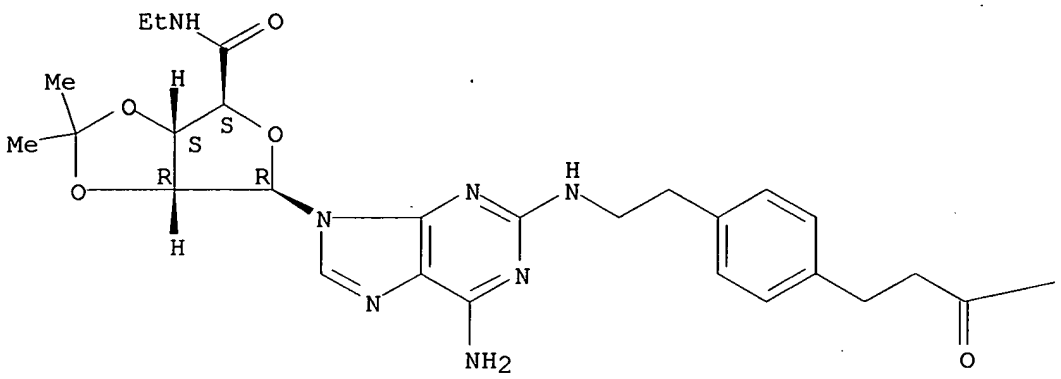
AB The invention concerns a method for measuring myocardial function in a mammal in need of such measurement by: (a) administering 2-substituted adenosine carboxamide derivs. at a dosage rate of less than 1 .mu.g/kg/min, preferably between about 0.01 and 1 .mu.g/kg/min; and then: (b) performing a technique on the mammal to detect myocardial function. The method can be used to diagnose myocardial dysfunction by electrophysiol. anal. or by imaging the vasculature of the heart, esp. under conditions that simulate stress.

IT **120225-76-5**
RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(diagnostic uses of 2-substituted adenosine carboxamides)

RN 120225-76-5 HCAPLUS
CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A




PAGE 1-B

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REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 2 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:904207 HCAPLUS
DOCUMENT NUMBER: 136:37902
TITLE: Preparation of 2-aminocarbonyl-9H-purine nucleosides and their uses in treatment of respiratory disease, as A2a receptor agonists and anti-inflammatory agents
INVENTOR(S): Mantell, Simon John; Stephenson, Peter Thomas
PATENT ASSIGNEE(S): Pfizer Limited, UK; Pfizer Inc.
SOURCE: PCT Int. Appl., 198 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001094368 | A1 | 20011213 | WO 2001-IB973 | 20010605 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,

RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---|---|---|---|---|---|
| US 2002058641 | A1 | 20020516 | US 2001-874007 | | 20010605 |
| EP 1292604 | A1 | 20030319 | EP 2001-934242 | | 20010605 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

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| PRIORITY APPLN. INFO.: | GB 2000-14048 | A | 20000606 |
| | GB 2000-18246 | A | 20000725 |
| | GB 2000-24920 | A | 20001011 |
| | US 2000-214307P | P | 20000627 |
| | US 2000-225236P | P | 20000815 |
| | US 2000-245243P | P | 20001102 |
| | WO 2001-IB973 | W | 20010605 |

OTHER SOURCE(S): MARPAT 136:37902
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

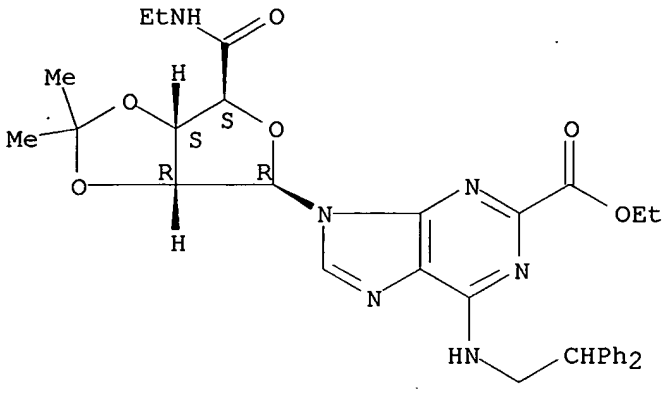
AB 2-Aminocarbonyl-9H-purine nucleosides I wherein R, R2 are independently H, alkyl; R1 is H, substituted alkyl, fluorenyl; R3 is H, alkyl, cycloalkyl, benzyl; R4 is substituted azetidin-3-yl, pyrrolidin-3-yl, piperidin-3-yl, piperidin-4-yl, homopiperidin-3-yl or homopiperidin-4-yl; R3R4 taken together with the nitrogen atom to which they are attached, represent azetidinyl, pyrrolidinyl, piperidinyl, piperazinyl, homopiperidinyl or homopiperazinyl, each being optionally substituted on a ring nitrogen or carbon atom by alkyl or cycloalkyl; R5 is CH2OH, amide; X is substituted alkylene; RX or R2X with the nitrogen atom to which they are attached , represent azetidin-3-yl, pyrrolidin-3-yl, piperidin-3-yl, piperidin-4-yl, homopiperidin-3-yl or homopiperidin-4-yl; Y is CO, CS, SO2, C=N(CN); were prepd. as A2a receptor agonists and anti-inflammatory agents. Thus, nucleoside II was prepd. and tested as A2a receptor agonist and anti-inflammatory agent. Title compds. were tested for biol. activity as A2a receptor agonists and anti-inflammatory agents and all were found to have an IC50 of less than 100 nM.

IT **380222-92-4P 380222-93-5P 380222-94-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of 2-aminocarbonyl-9H-purine nucleosides and uses in treatment of respiratory disease, as A2a receptor agonists and anti-inflammatory agents)

RN 380222-92-4 HCAPLUS

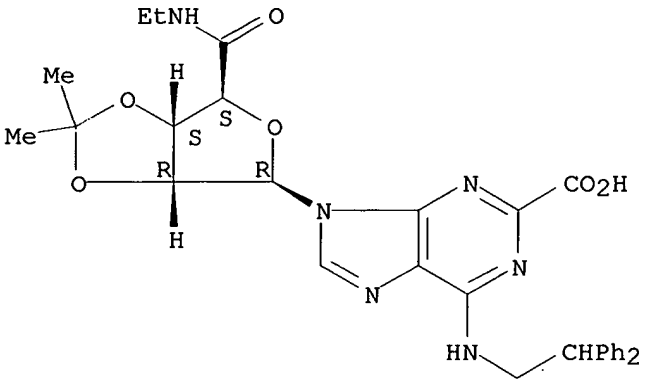
CN 9H-Purine-2-carboxylic acid, 6-[(2,2-diphenylethyl)amino]-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 380222-93-5 HCAPLUS
CN 9H-Purine-2-carboxylic acid, 6-[(2,2-diphenylethyl)amino]-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]- (9CI) (CA INDEX NAME)

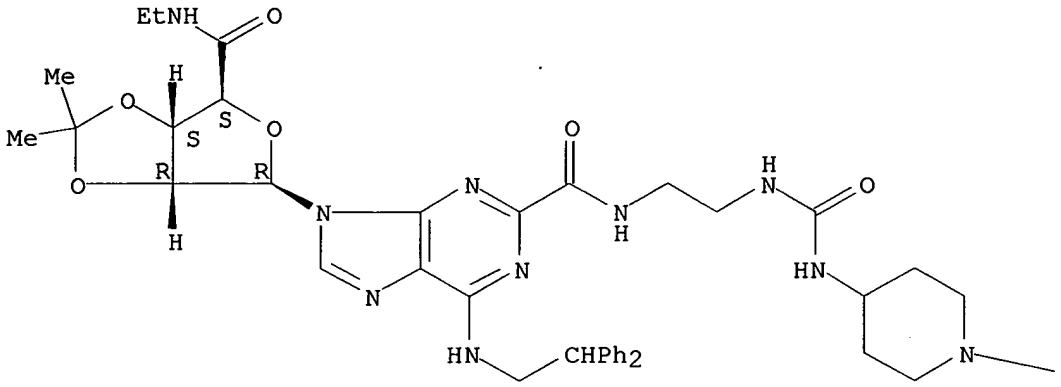
Absolute stereochemistry.



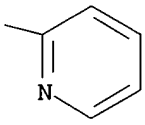
RN 380222-94-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[(2,2-diphenylethyl)amino]-2-[[[2-[[[[1-(2-pyridinyl)-4-piperidinyl]amino]carbonyl]amino]ethyl]amino]carbonyl]-9H-purin-9-yl]-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



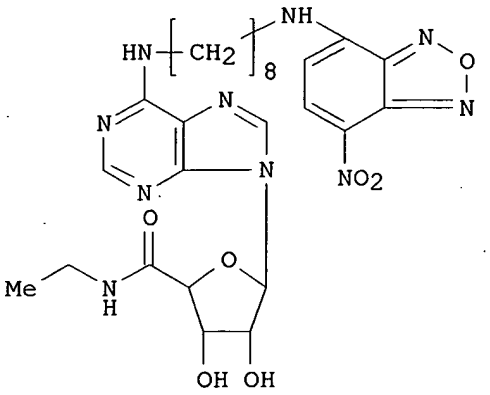
PAGE 1-B



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 3 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:872195 HCAPLUS
DOCUMENT NUMBER: 136:163634
TITLE: 7-Nitrobenzofurazan (NBD) derivatives of 5'-N-ethylcarboxamidoadenosine (NECA) as new fluorescent probes for human A3 adenosine receptors
AUTHOR(S): Macchia, Marco; Salvetti, Francesca; Bertini, Simone; Di Bussolo, Valeria; Gattuso, Lisa; Gesi, Marco; Hamdan, Mahmoud; Klotz, Karl-Norbert; Laragione, Teresina; Lucacchini, Antonio; Minutolo, Filippo; Nencetti, Susanna; Papi, Chiara; Tuscano, Daniela; Martini, Claudia
CORPORATE SOURCE: Dipartimento di Scienze Farmaceutiche, Universita di Pisa, Pisa, 56126, Italy

SOURCE: Bioorganic & Medicinal Chemistry Letters (2001), 11(23), 3023-3026
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

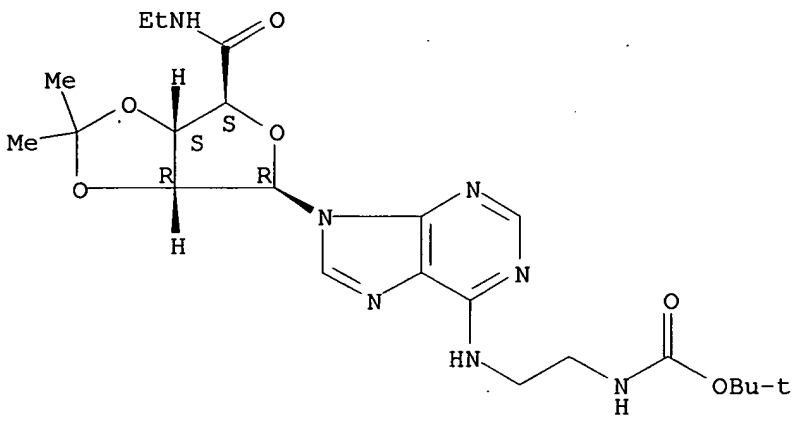
AB New fluorescent ligands for adenosine receptors (ARs), obtained by the insertion, in the N6 position of NECA, of NBD-moieties with linear alkyl spacers of increasing length, proved to possess a high affinity and selectivity for the A3 subtype expressed in CHO cells. In fluorescence microscopy assays, compd. I, the most active and selective for human A3-AR, permitted visualization and localization of this human receptor subtype, showing its potential suitability for internalization and trafficking studies in living cells.

IT **396718-59-5P 396718-60-8P 396718-61-9P**
**396718-62-0P 396718-63-1P 396718-64-2P**
**396718-65-3P 396718-67-5P 396718-69-7P**
**396718-71-1P 396718-75-5P 396718-77-7P**
**396718-79-9P 396718-81-3P 396718-83-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nitrobenzofurazan derivs. of ethylcarboxamidoadenosine as fluorescent probes for human A3 adenosine receptors)

RN 396718-59-5 HCAPLUS

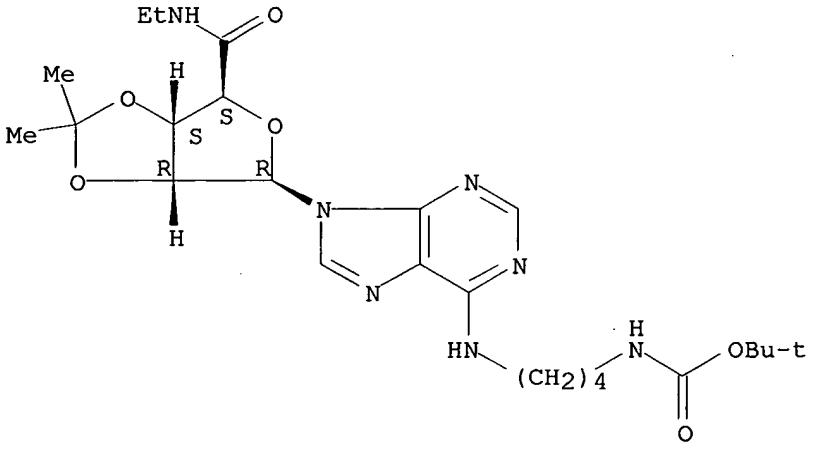
CN Carbamic acid, [2-[[9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-6-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



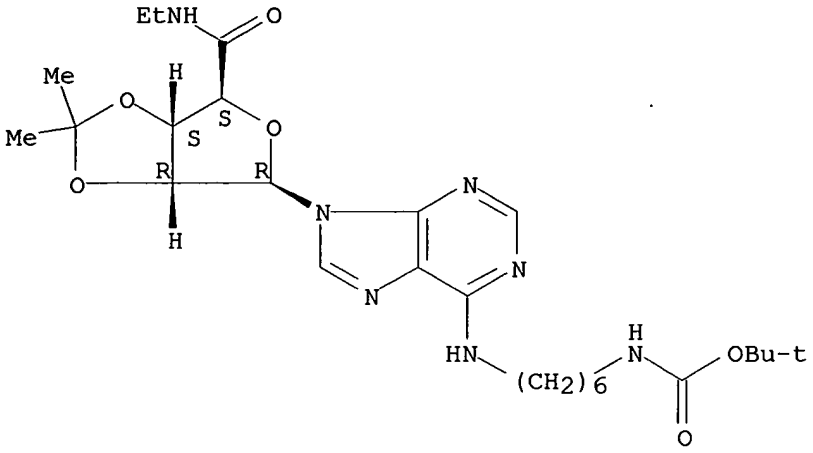
RN 396718-60-8 HCAPLUS
CN Carbamic acid, [4-[[9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-6-yl]amino]butyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



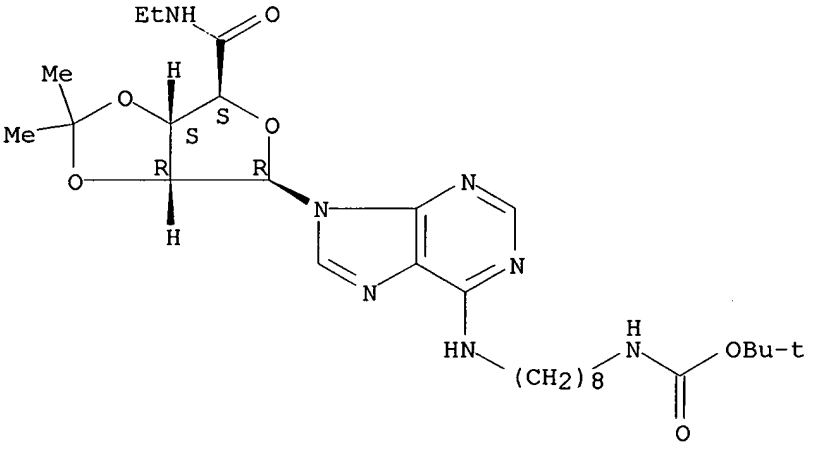
RN 396718-61-9 HCAPLUS
CN Carbamic acid, [6-[[9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-6-yl]amino]hexyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



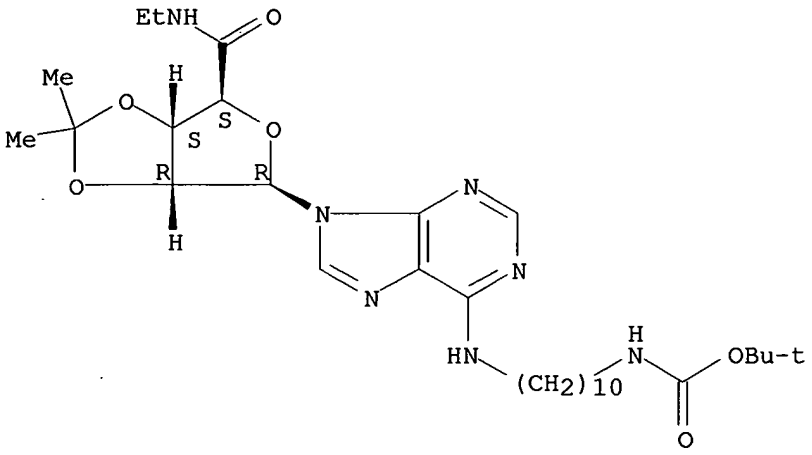
RN 396718-62-0 HCAPLUS
CN Carbamic acid, [8-[[9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-6-yl]amino]octyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



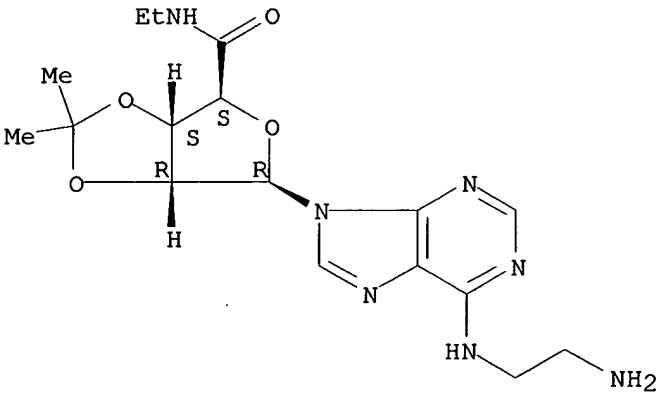
RN 396718-63-1 HCAPLUS
CN Carbamic acid, [10-[[9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-6-yl]amino]decyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



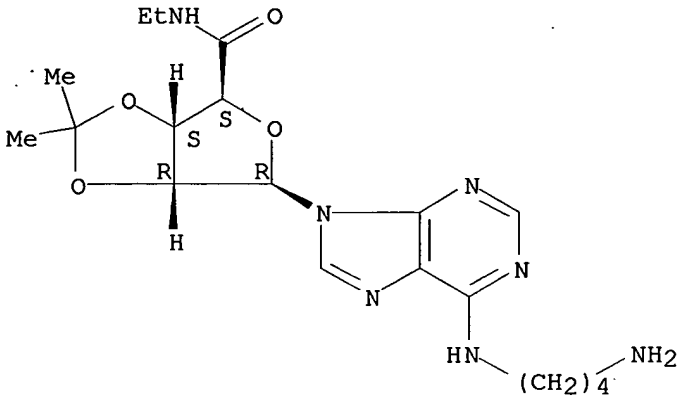
RN 396718-64-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(2-aminoethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



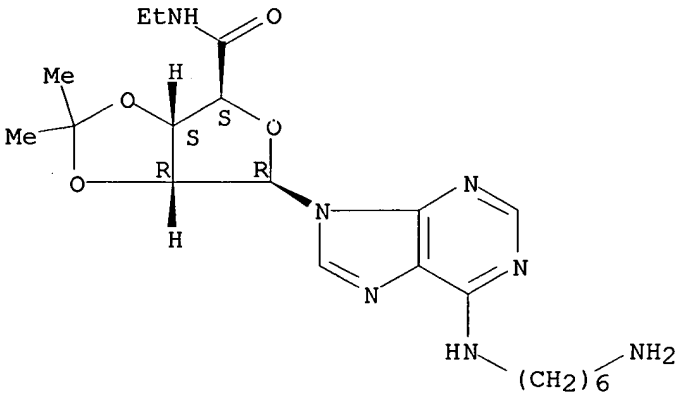
RN 396718-65-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(4-aminobutyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



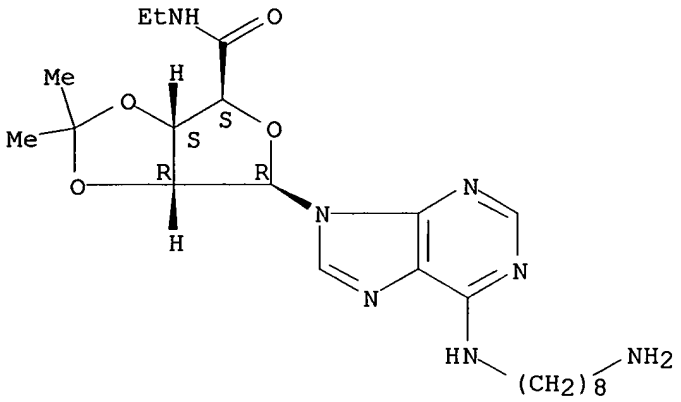
RN 396718-67-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(6-aminohexyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



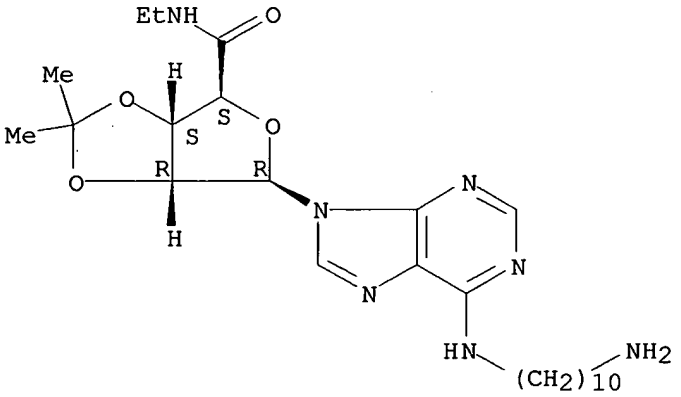
RN 396718-69-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(8-aminooctyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 396718-71-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(10-aminodecyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

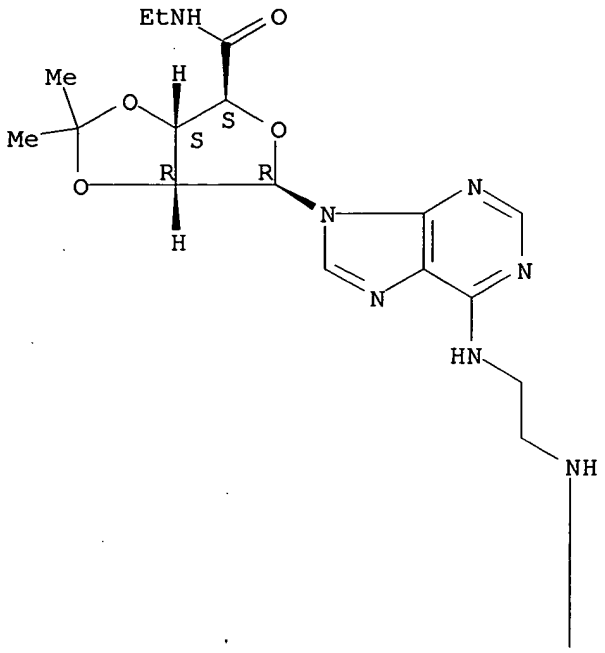
Absolute stereochemistry.



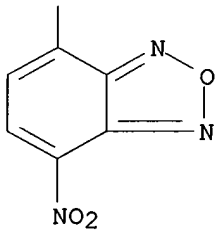
RN 396718-75-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[2-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]ethyl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



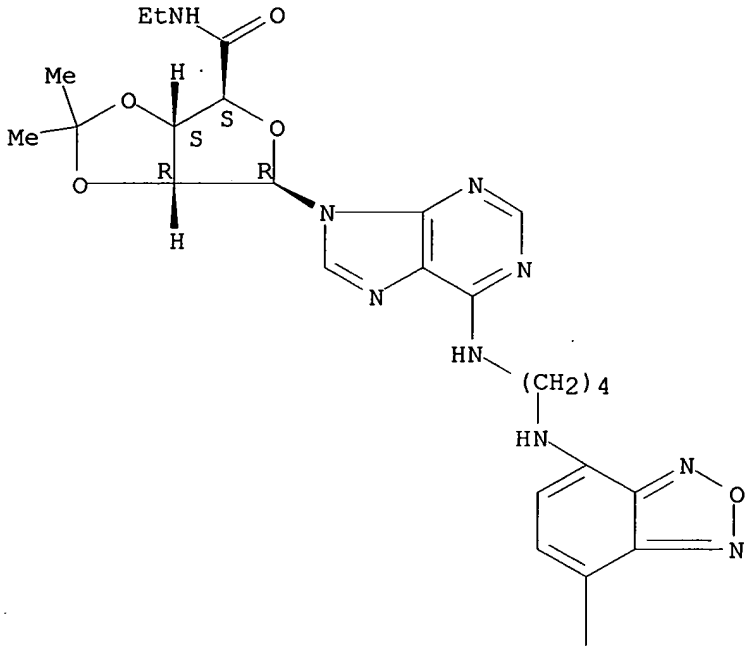

PAGE 2-A




RN 396718-77-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[4-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]butyl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

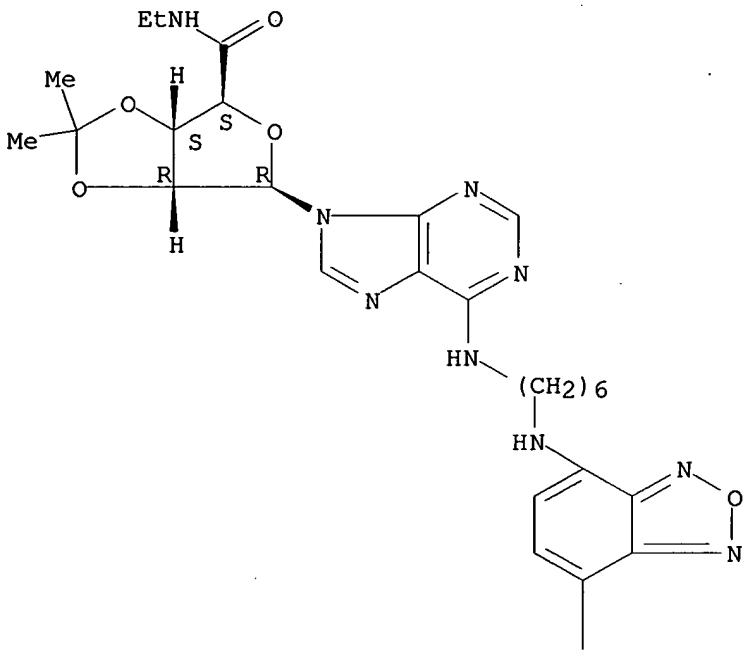



PAGE 2-A


RN 396718-79-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[6-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]hexyl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

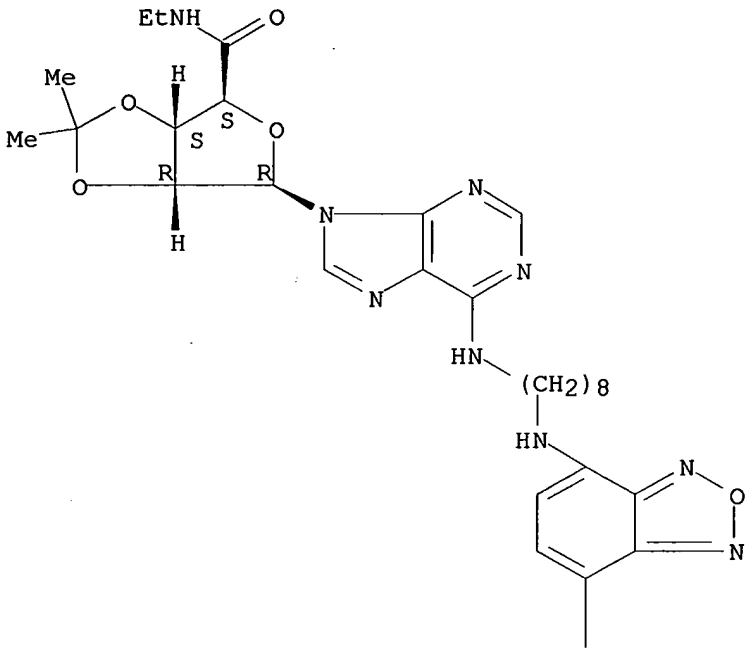



PAGE 2-A


RN 396718-81-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[8-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]octyl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

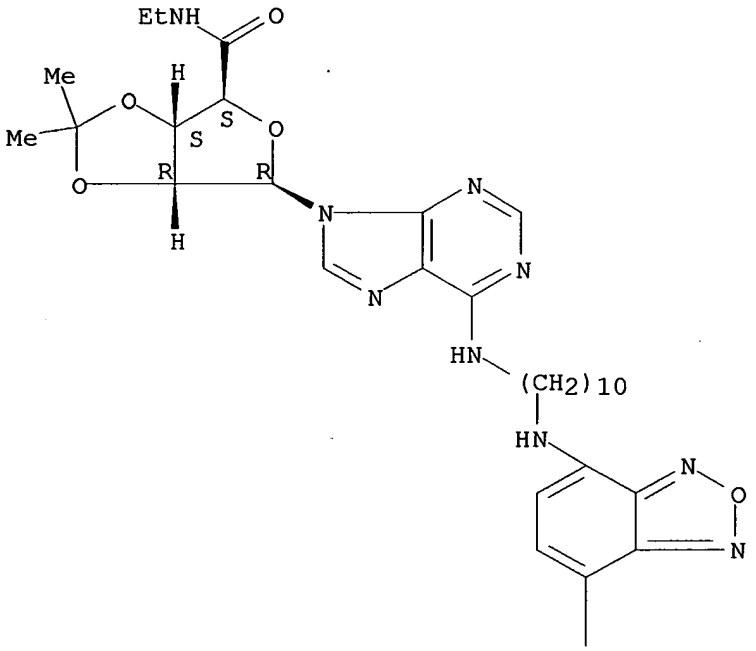



PAGE 2-A


RN 396718-83-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[10-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]decyl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A




PAGE 2-A


REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

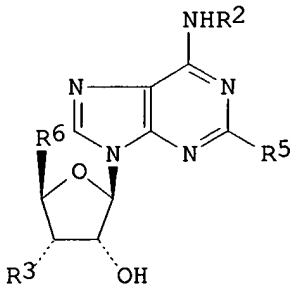
L35 ANSWER 40 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:193332 HCAPLUS
DOCUMENT NUMBER: 110:193332
TITLE: Preparation of adenosine-5'-carboxamide derivatives as adenosine-2 receptor agonists, antipsychotics, and antihypertensives and pharmaceutical compositions containing them
INVENTOR(S): Hutchison, Alan J.
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 277917 | A2 | 19880810 | EP 1988-810050 | 19880129 |
| EP 277917 | A3 | 19900328 | | |

R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE

| | | | | | |
|---|---|---|---|---|---|
| FI 8800405 | A | 19880805 | FI 1988-405 | 19880129 |
| JP 63201196 | A2 | 19880819 | JP 1988-21410 | 19880202 |
| DD 284679 | A5 | 19901121 | DD 1988-312611 | 19880202 |
| DK 8800544 | A | 19880805 | DK 1988-544 | 19880203 |
| NO 8800469 | A | 19880805 | NO 1988-469 | 19880203 |
| AU 8811233 | A1 | 19880818 | AU 1988-11233 | 19880203 |
| HU 46334 | A2 | 19881028 | HU 1988-509 | 19880203 |
| HU 199155 | B | 19900129 | | |
| ZA 8800755 | A | 19891025 | ZA 1988-755 | 19880203 |

PRIORITY APPLN. INFO.: US 1987-11169 19870204
OTHER SOURCE(S): MARPAT 110:193332
GI




I

AB The title compds. [I; R2 = H, alkyl, aralkyl; R3 = H, OH; R5 = NRR1 where R = H, alkyl and R1 = cycloalkyl, cycloalkylalkyl, 2-norbornanyl, etc.; R6 = R4NHCO where R4 = H, alkyl, aralkyl, cycloalkyl, hydroxyalkyl] (II) and their pharmaceutically acceptable salts, useful as adenosine-2 receptor agonists, antipsychotics, antithrombotics, and antihypertensives, are prepd. A mixt. of 2-chloro-2',3'-O-isopropylideneadenosine-5'-N-ethylcarboxamide and 2-phenethylamine was heated at 130.degree. for 2 h to give 2-(2-phenethylamino)-2',3'-O-isopropylideneadenosine-5'-N-ethylcarboxamide, which was heated with 1N HCl at 65.degree. for 1 h to give 2-(2-phenethylamino)-5'-N-ethylcarboxamide (III). In vivo studies of the adenosine-2 receptor agonistic activity of II using spontaneously hypertensive rats showed that II effectively lowered the blood pressure without any significant effect on the heart rate. One thousand tablets were prepd. from III 100.00, lactose 2400.00, corn starch 125.00, polyethyleneglycol 6000 150.00, Mg stearate 40.00 g, and water q.s.

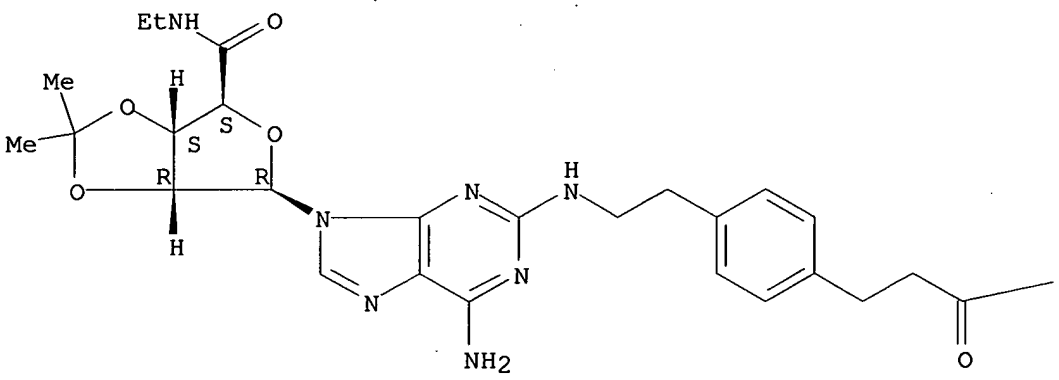
IT **120225-76-5P 120225-77-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of adenosinecarboxamide derivs. as CNS and cardiovascular agents)

RN 120225-76-5 HCAPLUS

CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

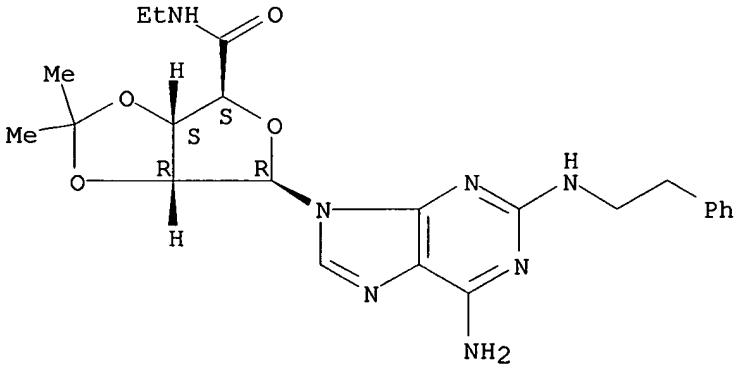



PAGE 1-B

—OBu-t

RN 120225-77-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

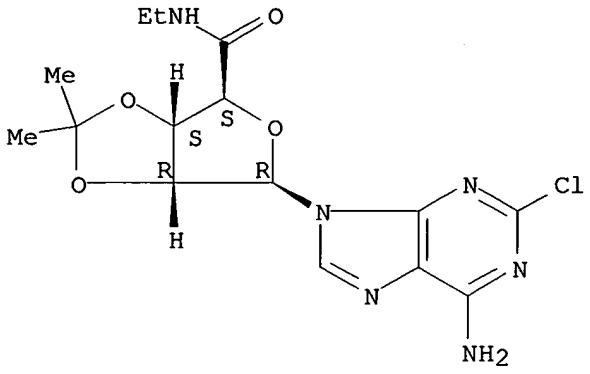
Absolute stereochemistry.




IT **120225-75-4 120225-76-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of adenosinecarboxamide derivs. as CNS and cardiovascular agents)

RN 120225-75-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

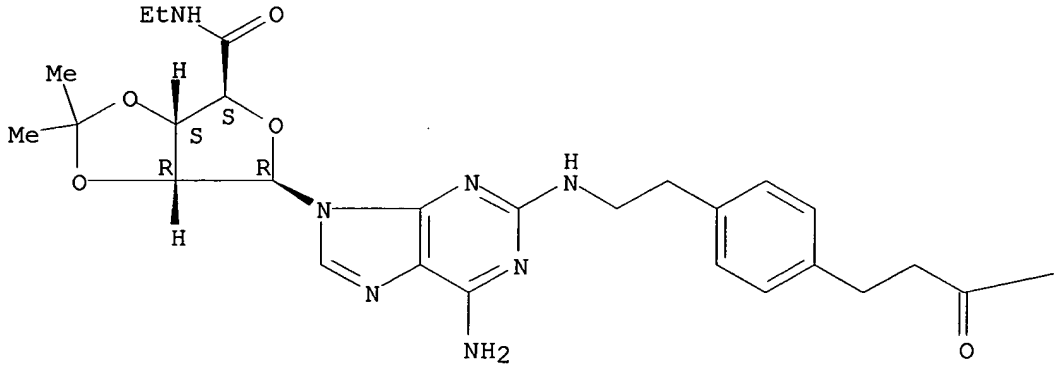
Absolute stereochemistry.




RN 120225-76-5 HCAPLUS
CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



—OBu-t

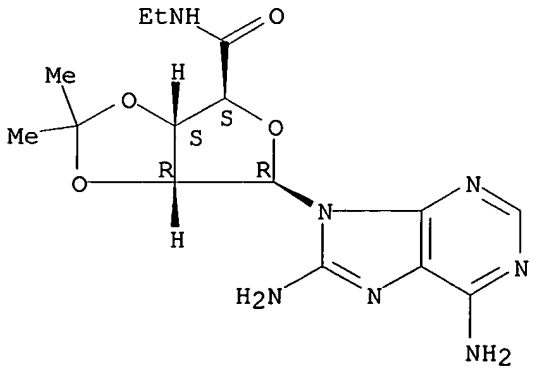
L35 ANSWER 41 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:24223 HCAPLUS
DOCUMENT NUMBER: 110:24223
TITLE: Conformational analysis of 8-substituted isopropylidene derivatives of adenosine-5'-carboxylic acid
AUTHOR(S): Timoshchuk, V. A.; Ermolenko, T. M.; Akhrem, A. A.
CORPORATE SOURCE: Beloruss. Inst. Epidemiol. Mikrobiol., Minsk, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1988), 24(6), 1214-20
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB NMR data confirms that for 2',3'-O-isopropylidene derivs. of adenosine 5'-carboxylic acid the most probable conformation is C4'-endo, O4'-exo, and C1'-endo. Compds. of this series are characterized principally by a syn-conformation of the heterocycle around the N-glycosidic bond relative to the ribose fragment of the mols. CD data confirmed that conformations are stabilized by a spatial convergence of the N3 heterocyclic atom and the carboxyl group.

IT **101966-36-3 101966-40-9 101966-46-5**
RL: PRP (Properties)
(conformation of, NMR and CD in relation to)

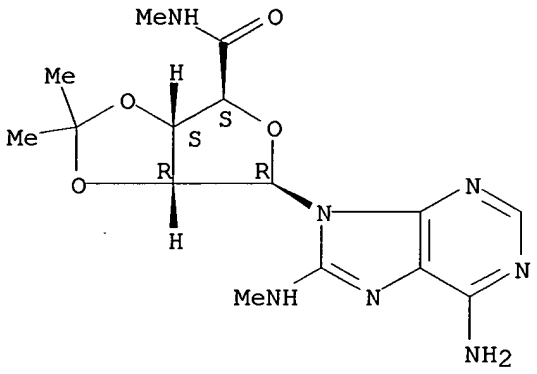
RN 101966-36-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-(6,8-diamino-9H-purin-9-yl)-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



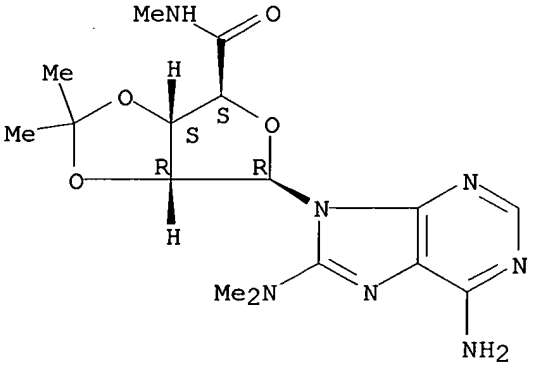
RN 101966-40-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-8-(methylamino)-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

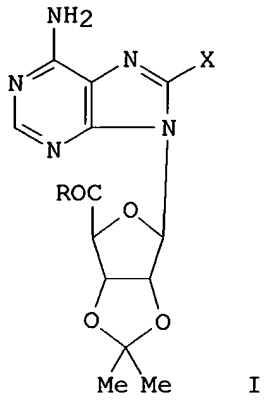



RN 101966-46-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-8-(dimethylamino)-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L35 ANSWER 42 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:627200 HCAPLUS
DOCUMENT NUMBER: 105:227200
TITLE: Synthesis of uronic acid nucleosides. II. Synthesis of 8-substituted adenosine-5'-carboxamides
AUTHOR(S): Akhrem, A. A.; Ermolenko, T. M.; Timoshchuk, V. A.
CORPORATE SOURCE: Beloruss. Nauchno-Issled. Inst. Epidemiol. Mikrobiol., Minsk, USSR
SOURCE: Zhurnal Organicheskoi Khimii (1985), 21(8), 1800-5
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI



I

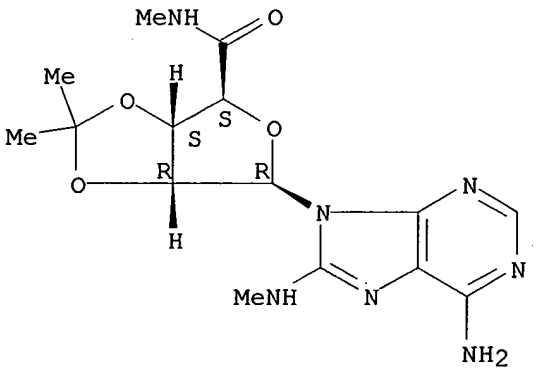
AB Amides of 8-substituted adenosine-5'-carboxylic acid were prepd. Starting from the Me ester of 8-bromo-2',3'-O-isopropylideneadenosine-5'-carboxylate and the Et ester of 8-bromoadenosine-5'-carboxylate were obtained the amide, methylamide, dimethylamide, and the ethylamide of the corresponding acid, which contained bromo-, amino, methylamino-, dimethylamino-, ethylamino-, and mercapto groups in position 8 of the adenine base. Thus, treating adenosine I (R = OMe, X = Br) with NH3 in MeOH at 18-25.degree. gave 82% I (R = NH2, X = Br). The selectivity of primary and secondary amines, on the ester group and 8-bromoadenine residue was demonstrated.

IT **101966-40-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)

RN 101966-40-9 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-[6-amino-8-(methylamino)-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

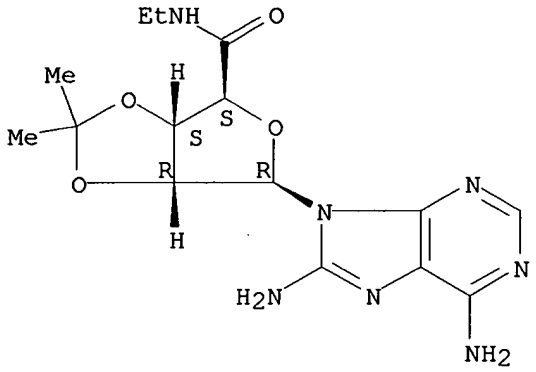


IT **101966-36-3P 101966-46-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 101966-36-3 HCAPLUS

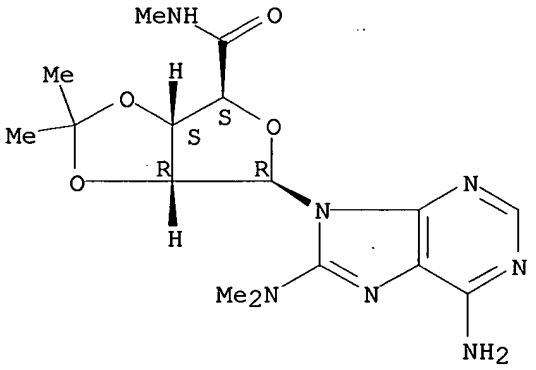
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-(6,8-diamino-9H-purin-9-yl)-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 101966-46-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-8-(dimethylamino)-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

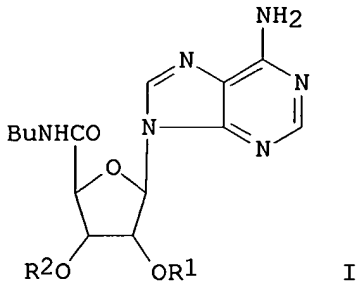
Absolute stereochemistry.




L35 ANSWER 43 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:56841 HCAPLUS
DOCUMENT NUMBER: 100:56841
TITLE: Fibrinolytic formulations containing adenosine derivatives
PATENT ASSIGNEE(S): Tanabe Seiyaku Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

JP 58174324 A2 19831013 JP 1982-58507 19820407
PRIORITY APPLN. INFO.: JP 1982-58507 19820407
GI



I

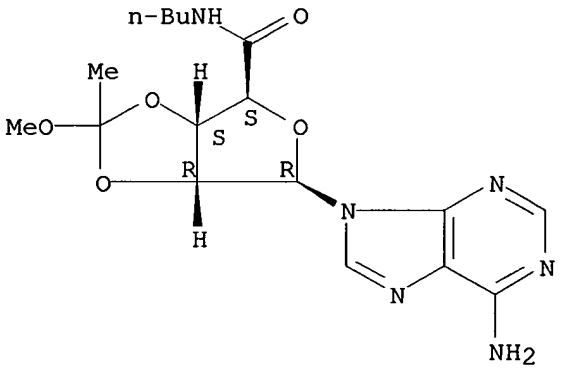
AB Formulations contg. I (R1 and R2 = propionyl or R1 + R2= methoxyethylidene) activate fibrinolysis. Thus, 2',3'-O-dipropionyladenosine-5'-carboxylic acid butylamide(I) [88480-43-7] 70, D-mannitol 73, and corn starch 50 g were mixed using 5 g hydroxypropyl cellulose as binder, granulated, combined with 2 g Mg stearate, and made into tablets. I was prepd. by the acylation of adenosine-5'-carboxylic acid butylamide [35788-23-9] with propionic anhydride.

IT **62622-82-6P**
RL: PREP (Preparation)
(prepn. of, for fibrinolysis activation)

RN 62622-82-6 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-butyl-1-deoxy-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

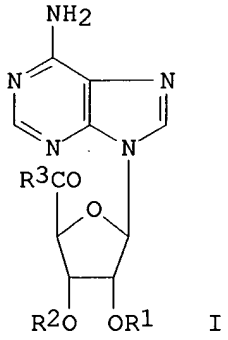


L35 ANSWER 44 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:26035 HCAPLUS
DOCUMENT NUMBER: 100:26035
TITLE: Fibrinolytic formulations containing adenosine derivatives
PATENT ASSIGNEE(S): Tanabe Seiyaku Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 58174323 | A2 | 19831013 | JP 1982-58506 | 19820407 |

PRIORITY APPLN. INFO.: JP 1982-58506 19820407
GI



I

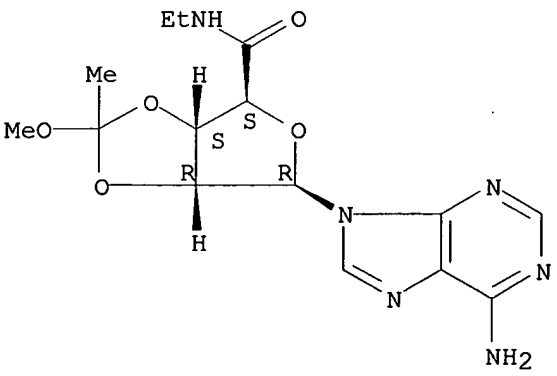
AB Fibrinolytic formulations contain I (R1 and R2 = H, alkanoyl, etc.; R3 = C1-3 alkylamino, alkenylamino, etc.). Thus, adenosine-5'-carboxylic acid cyclohexylamide [35788-32-0] was treated with Me orthoacetate [56893-90-4] to give 2',3'-O-methoxyethylideneadenosine-5'-carboxylic acid cyclohexylamide (II) [88255-85-0]. Tablets contg. 1% I were described. The min. effective oral dose for the hemolytic activity of II in rats was 30 mg/kg.

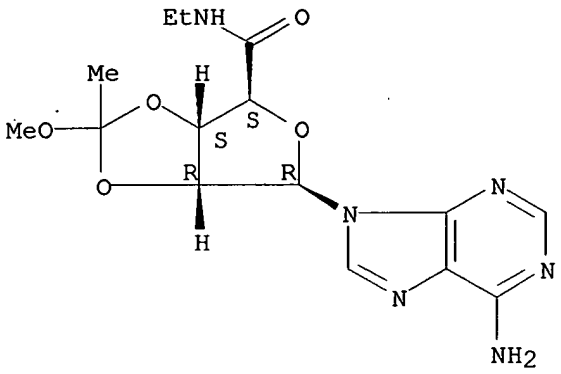
IT **62622-78-0P 88255-90-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and fibrinolytic activity of)

RN 62622-78-0 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

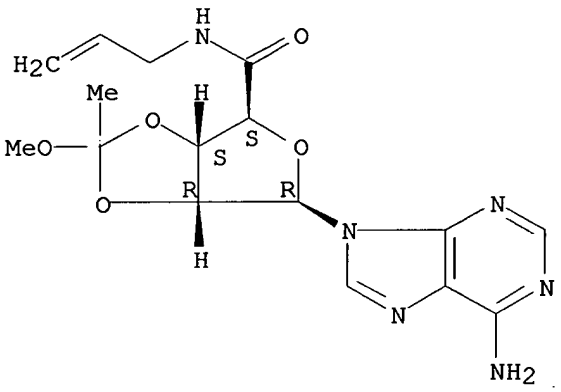
Absolute stereochemistry.



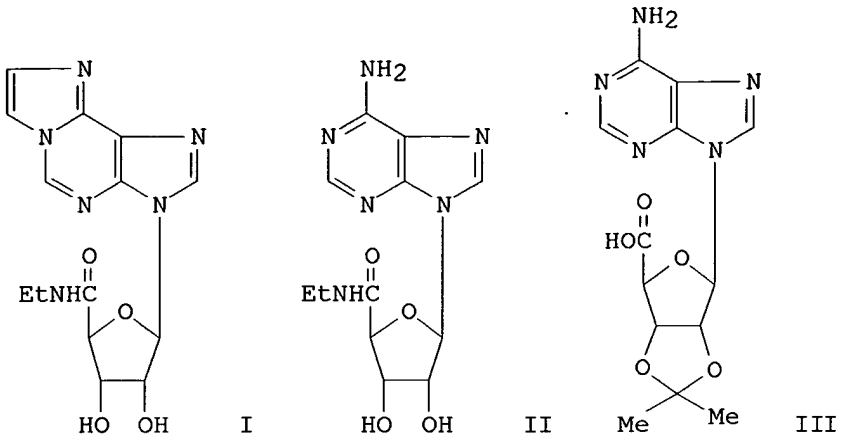


RN 88255-90-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-N-2-propenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 45 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:215696 HCAPLUS
DOCUMENT NUMBER: 92:215696
TITLE: N1,N6-Ethenoadenosine-5'-(N-ethyl carboxamide)
AUTHOR(S): Prasad, Raj Nandan; Tietje, Karin
CORPORATE SOURCE: Org. Chem. Res., Abbott Lab., Ltd., Montreal, QC, H4P 1A5, Can.
SOURCE: Nucl. Acid Chem. (1978), Volume 2, 701-7. Editor(s): Townsend, Leroy B.; Tipson, R. Stuart. Wiley: New York, N. Y.
CODEN: 42TBAU
DOCUMENT TYPE: Conference
LANGUAGE: English
GI



I II III

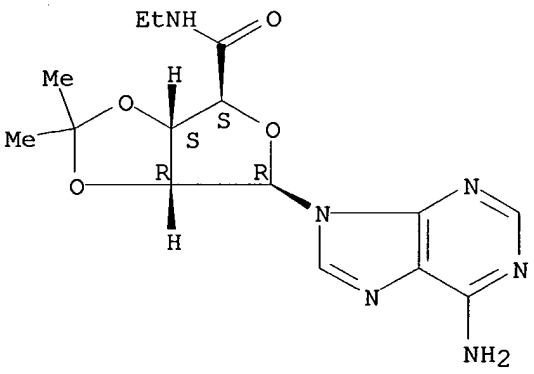
AB Ethenoadenosine I was prepd. by cyclization of adenosine II with ClCH2CHO. II was prepd. from acid III by 3 methods, e.g., by sequential chlorination with SOCl2, amidation with EtNH2, and deisopropylidenation.

IT **39491-53-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)

RN 39491-53-7 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 60 OF 63 HCAPLUS COPYRIGHT 2003 ACS

| | |
|---|---|
| ACCESSION NUMBER: | 1976:59956 HCAPLUS |
| DOCUMENT NUMBER: | 84:59956 |
| TITLE: | Adenosine-5'-carboxylic acid amides |
| INVENTOR(S): | Stein, Herman Hal; Prasad, Raj N. |
| PATENT ASSIGNEE(S): | Abbott Laboratories, USA |
| SOURCE: | U.S., 7 pp. Division of U.S. 3,864,483. CODEN: USXXAM |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | English |
| FAMILY ACC. NUM. COUNT: | 5 |

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 3914415 | A | 19751021 | US 1974-492950 | 19740730 |
| US 4029884 | A | 19770614 | US 1972-236980 | 19720322 |
| US 3864483 | A | 19750204 | US 1973-370084 | 19730614 |

PRIORITY APPLN. INFO.: US 1971-125893 19710318
US 1972-236980 19720322
US 1973-370084 19730614

GI For diagram(s), see printed CA Issue.

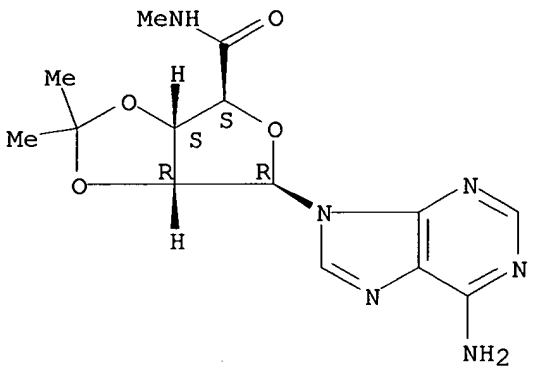
AB I (e.g., R1 = H, R2 = H, adamantyl, cyclopropyl, Et, PhOCH2CH2, allyl, 2,6-Me2C6H3, HOCH2CH2; R1 = R2 = allyl) (34 compds.), possessing cardiovascular and antiinflammatory activities, were prepd. by treatment of 2',3'-O-isopropylideneadenosine-5'-carboxylic acid chloride with R1R2NH followed by hydrolysis with 1N HCl.

IT **39491-51-5P 39491-53-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deblocking of)

RN 39491-51-5 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

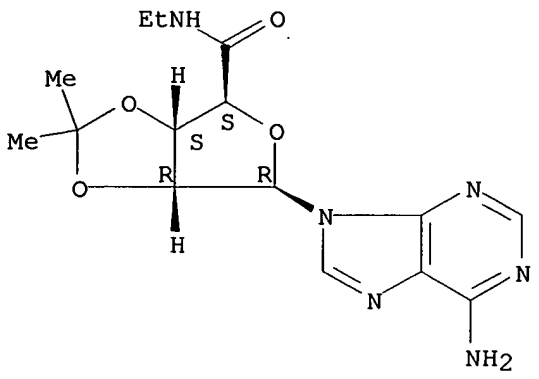
Absolute stereochemistry.




RN 39491-53-7 HCAPLUS

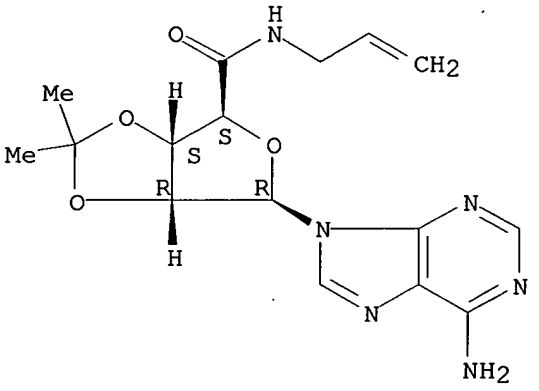
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **58048-27-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 58048-27-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-N-2-propenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 61 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1976:44606 HCAPLUS
DOCUMENT NUMBER: 84:44606
TITLE: Compounds for increasing coronary partial pressure of oxygen in mammals
INVENTOR(S): Stein, Herman Hal; Prasad, Raj N.
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: U.S., 7 pp. Division of U.S. 3,864,483.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| US 3914414 | A | 19751021 | US 1974-492949 | 19740730 |
| US 4029884 | A | 19770614 | US 1972-236980 | 19720322 |
| US 3864483 | A | 19750204 | US 1973-370084 | 19730614 |
| US 3966917 | A | 19760629 | US 1975-590548 | 19750626 |

PRIORITY APPLN. INFO.:
US 1971-125893 19710318
US 1972-236980 19720322
US 1973-370084 19730614
US 1974-492949 19740730

AB Adenosine-5'-carboxamides, useful as antihypertensive agents, were prepd. by treating 2',3'-O-isopropylideneadenosine-5'-carbonyl chloride (I) with amines followed by acid hydrolysis. Thus, I with NH3 2 hr at -50.degree. gave 55% 2',3'-O-isopropylideneadenosine-5'-carboxamide (II). Treatment of II with 1N HCl at 60-70.degree. for 45 min gave adenosine-5'-carboxamide.

IT **57872-94-3P 57872-95-4P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and antihypertensive activity of)

RN 57872-94-3 HCAPLUS
RN 57872-95-4 HCAPLUS

L35 ANSWER 62 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1975:156656 HCAPLUS
DOCUMENT NUMBER: 82:156656
TITLE: 1,N6-Etheno-5'-adenosine carboxamides
INVENTOR(S): Prasad, Raj N.; Garmaise, David L.
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 3830796 | A | 19740820 | US 1972-317326 | 19721221 |
| US 3931401 | A | 19760106 | US 1974-472029 | 19740521 |

PRIORITY APPLN. INFO.:
US 1972-317326 19721021

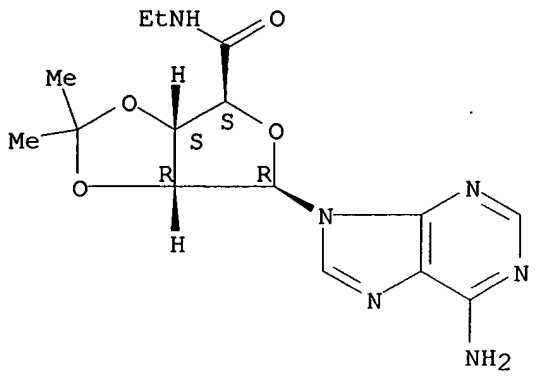
GI For diagram(s), see printed CA Issue.

AB Adenosines (I; R = Et, allyl, cyclobutyl), useful as antianginals and antihypertensives, were prepd. Thus, 2',3'-O-isopropylideneadenosine 5'-carboxylic acid chloride was treated with EtNH2 at -50 to -35.degree. to give the 5'-(N-ethylcarboxamide) which, treated 1 hr with 1N HCl, gave adenosine 5'-(N-ethylcarboxamide) II. Treatment of II with ClCH2CHO gave I (R = Et). The allyl and cyclobutyl derivs. were similarly prepd.

IT **39491-53-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 39491-53-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

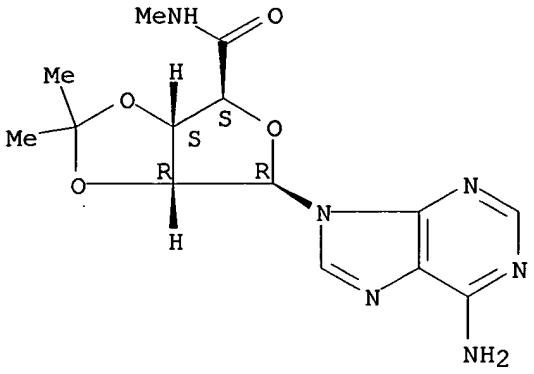



L35 ANSWER 63 OF 63 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1973:16454 HCAPLUS
DOCUMENT NUMBER: 78:16454
TITLE: Adenosine-5'-carboxamides
INVENTOR(S): Stein, Herman Hal; Prasad, Raj Nandan
PATENT ASSIGNEE(S): Abbott Laboratories
SOURCE: Ger. Offen., 12 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 2213180 | A | 19720928 | DE 1972-2213180 | 19720317 |
| CA 1019727 | A1 | 19771025 | CA 1972-135283 | 19720222 |
| GB 1386656 | A | 19750312 | GB 1972-8446 | 19720223 |
| ZA 7201222 | A | 19721129 | ZA 1972-1222 | 19720224 |
| CH 551446 | A | 19740715 | CH 1972-3873 | 19720316 |
| FR 2130364 | A5 | 19721103 | FR 1972-9349 | 19720317 |
| SE 405363 | C | 19790315 | SE 1972-3515 | 19720317 |
| SE 405363 | B | 19781204 | | |

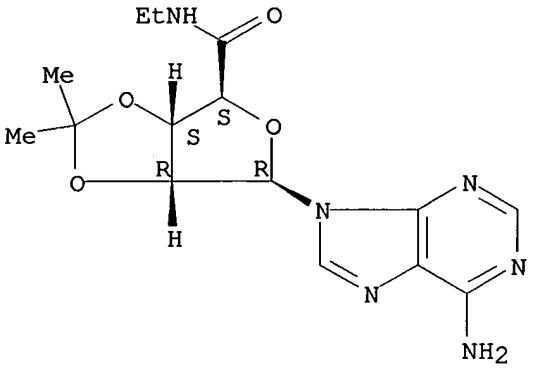
PRIORITY APPLN. INFO.: US 1971-125893 19710318
GI For diagram(s), see printed CA Issue.
AB Four title compds. (I, R = H; R1 = NH2, NHMe, NMe2, and NHEt), useful in the treatment of angina pectoris and circulatory disturbances and as antihypertensives, were prepd. Chlorination of I (RR = CMe2, R1 = OH) with SOCl2 to give I (RR = CMe2, R1 = Cl), followed by treatment with amines, R1H, and hydrolysis with N HCl gave the corresponding title compd.
IT **39491-51-5P 39491-53-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 39491-51-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

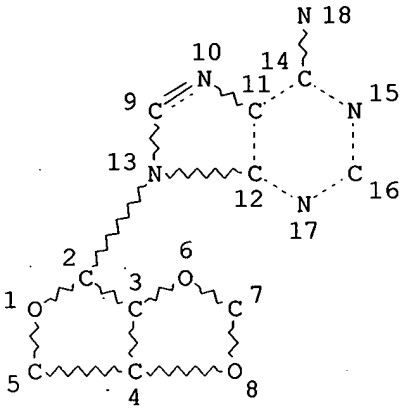



RN 39491-53-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



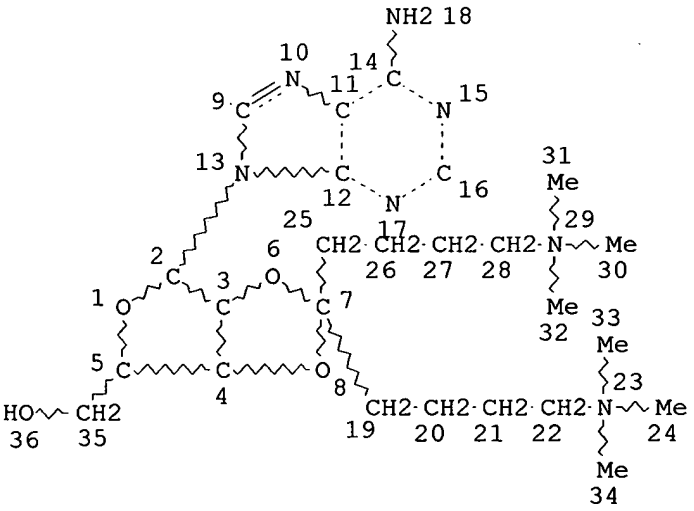
=> d que l21
L1 STR



NODE ATTRIBUTES:
NSPEC IS RC AT 18
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
L2 3214 SEA FILE=REGISTRY SSS FUL L1
L20 STR



NODE ATTRIBUTES:
CONNECT IS E2 RC AT 9
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 36

STEREO ATTRIBUTES: NONE
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L1              STR
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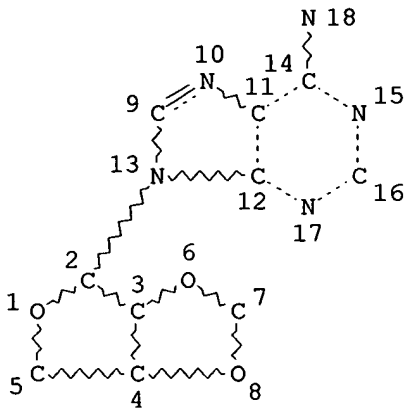


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NODE ATTRIBUTES:
NSPEC   IS RC     AT  18
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS  16

STEREO ATTRIBUTES: NONE
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L22        36416 SEA FILE=HCAPLUS ABB=ON  PLU=ON  HYPERTENSION/CT
L25         5576 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ISCHEMIA+OLD/CT
L26         2613 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANTI-ISCHEMIC AGENTS/CT
L27         4987 SEA FILE=HCAPLUS ABB=ON  PLU=ON  VASODILATION/CT
L28         8845 SEA FILE=HCAPLUS ABB=ON  PLU=ON  VASODILATORS/CT
L29           39 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 AND (L22 OR HYPERTENS? OR
                 L25 OR L26 OR ISCHEM? OR L27 OR L28 OR VASODIL? OR SYMPATHET?(2
                 A)BLOCK? OR PROPHYLACT?)


=> d ibib abs hitstr l29 1-39

L29  ANSWER 1 OF 39  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:332678  HCAPLUS
DOCUMENT NUMBER:          136:350561
TITLE:                    Use of P2Y12 receptor antagonists as platelet
                          aggregation inhibitors
INVENTOR(S):              Boyer, Jose L.; Olins, Gillian M.; Yerxa, Benjamin R.;
                          Douglass, James G.
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 43 pp., Cont.-in-part of U. S.
                          Ser. No. 643,138.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   4
PATENT INFORMATION:
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| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2002052337 | A1 | 20020502 | US 2001-934970 | 20010821 |
| US 2002128224 | A1 | 20020912 | US 2002-87551 | 20020227 |
| US 2003008834 | A1 | 20030109 | US 2002-82998 | 20020227 |

PRIORITY APPLN. INFO.: US 2000-643138 A2 20000821
US 2001-934970 A2 20010821

OTHER SOURCE(S): MARPAT 136:350561

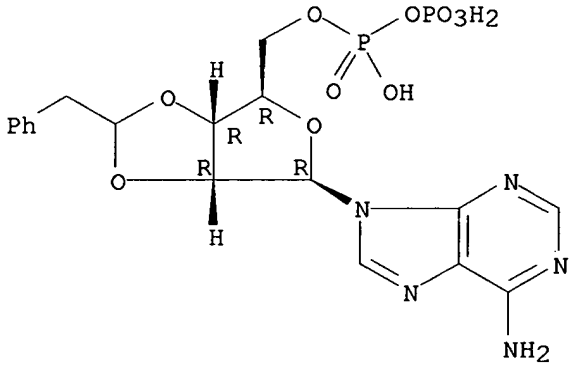
AB The invention discloses a method of preventing or treating diseases or conditions assocd. with platelet aggregation and treating thrombosis. The method involves administering to a subject a pharmaceutical compn. comprising a therapeutic effective amt. of P2Y12 receptor antagonist compd., to bind the P2Y12 receptors on platelets and inhibit ADP-induced platelet aggregation. The P2Y12 receptor antagonist compds. disclosed include mononucleoside polyphosphates and dinucleoside polyphosphates.

IT **401619-32-7 401619-52-1 401619-57-6**
**401620-06-2 420131-31-3 420131-40-4**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(P2Y12 receptor antagonists as platelet aggregation inhibitors)

RN 401619-32-7 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2',3'-O-(2-phenylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

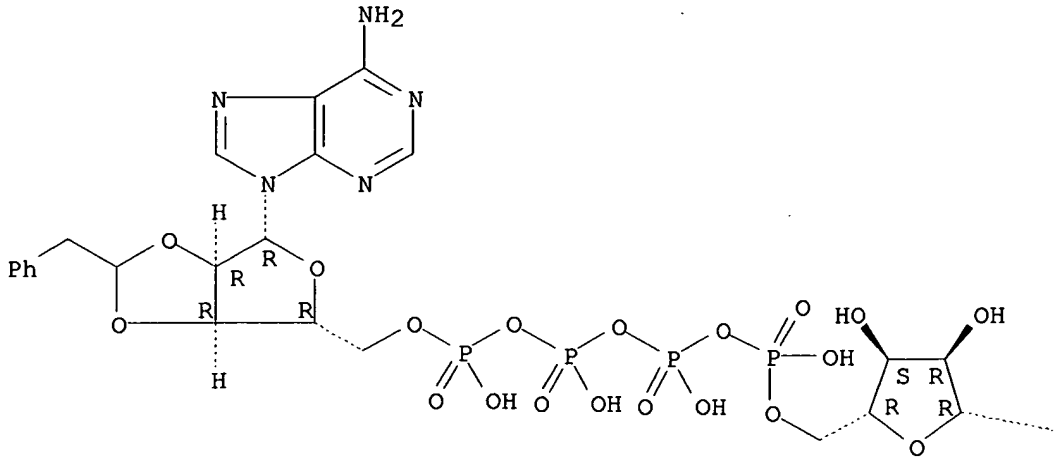



RN 401619-52-1 HCAPLUS

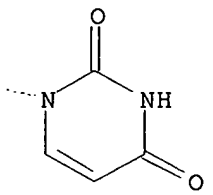
CN Adenosine 5'-(pentahydrogen tetraphosphate), 2',3'-O-(2-phenylethylidene)- , P'''.fwdarw.5'-ester with uridine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



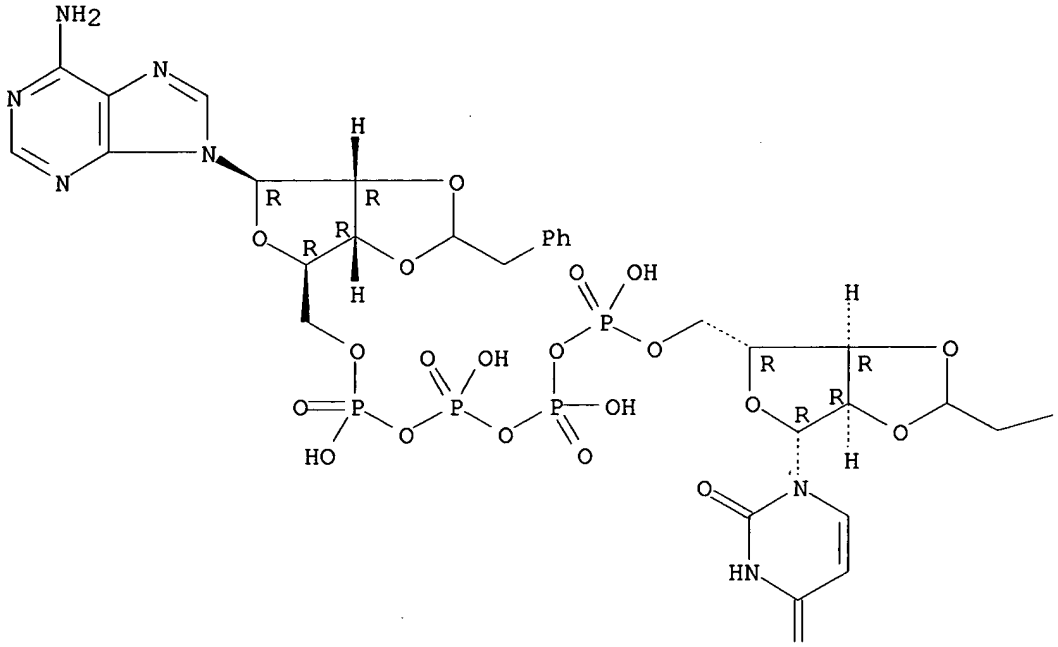
PAGE 1-B



RN 401619-57-6 HCAPLUS
CN Adenosine 5'-(pentahydrogen tetraphosphate), 2',3'-O-(2-phenylethylidene)-, P'''.fwdarw.5'-ester with 2',3'-O-(2-phenylethylidene)uridine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

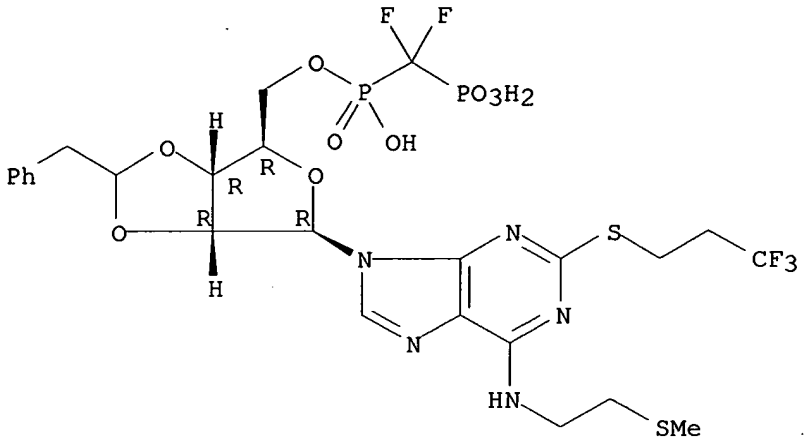


PAGE 1-B

PAGE 2-A

RN 401620-06-2 HCAPLUS
CN Adenosine, N-[2-(methylthio)ethyl]-2',3'-O-(2-phenylethylidene)-2-[(3,3,3-trifluoropropyl)thio]-, 5'-[hydrogen (difluorophosphonomethyl)phosphonate] (9CI) (CA INDEX NAME)

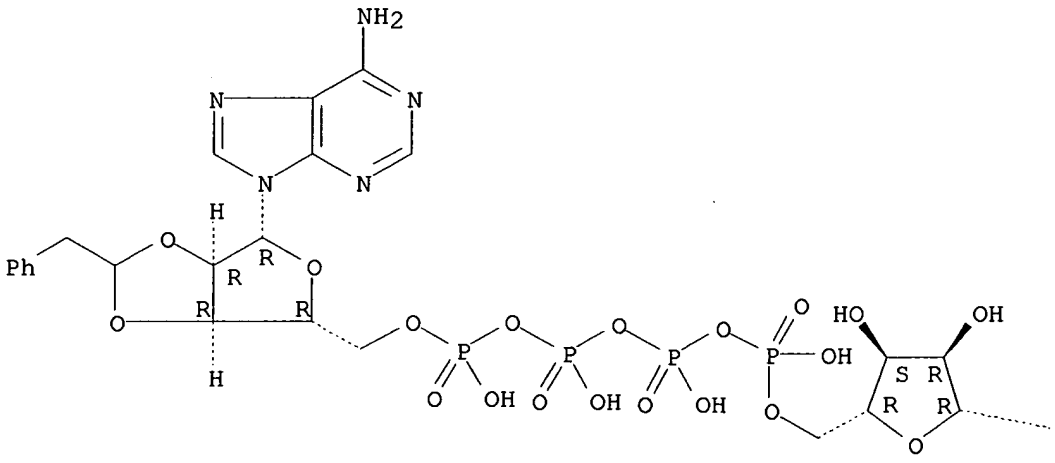
Absolute stereochemistry.



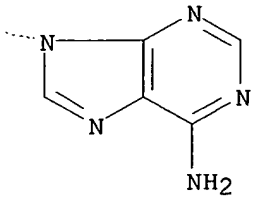
RN 420131-31-3 HCAPLUS
CN Adenosine 5'-(pentahydrogen tetraphosphate), 2',3'-O-(2-phenylethylidene)-, P'''.fwdarw.5'-ester with adenosine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



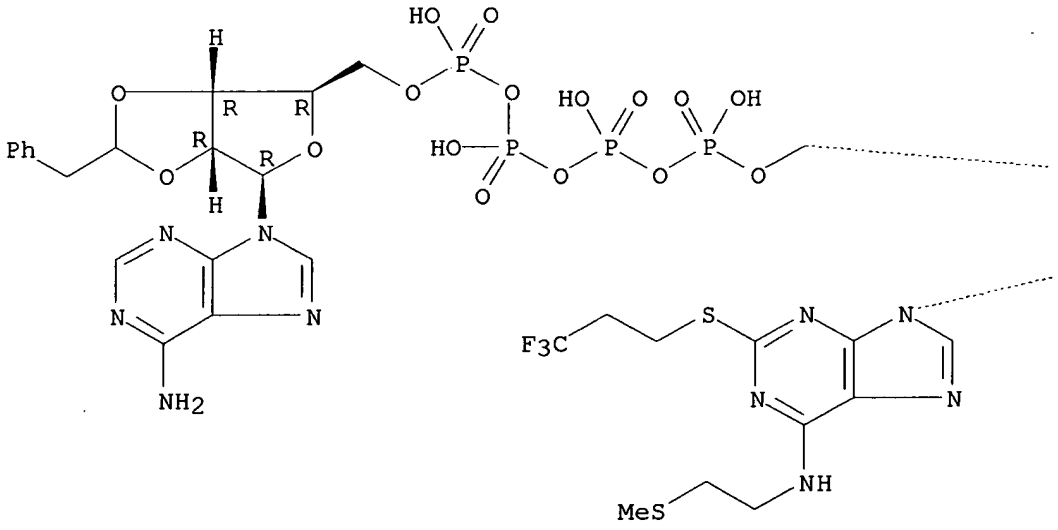
PAGE 1-B

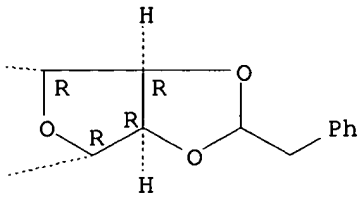


RN 420131-40-4 HCAPLUS
CN Adenosine 5'-(pentahydrogen tetraphosphate), N-[2-(methylthio)ethyl]-2',3'-O-(2-phenylethylidene)-2-[(3,3,3-trifluoropropyl)thio]-, P'''.fwdarw.5'-ester with 2',3'-O-(2-phenylethylidene)adenosine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





L29 ANSWER 2 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:271942 HCAPLUS
DOCUMENT NUMBER: 136:291358
TITLE: Diagnostic uses of 2-substituted adenosine carboxamides
INVENTOR(S): Leung, Edward
PATENT ASSIGNEE(S): King Pharmaceuticals Research and Development, Inc., USA
SOURCE: U.S., 17 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6368573 | B1 | 20020409 | US 1999-440330 | 19991115 |

PRIORITY APPLN. INFO.: US 1999-440330 19991115
OTHER SOURCE(S): MARPAT 136:291358

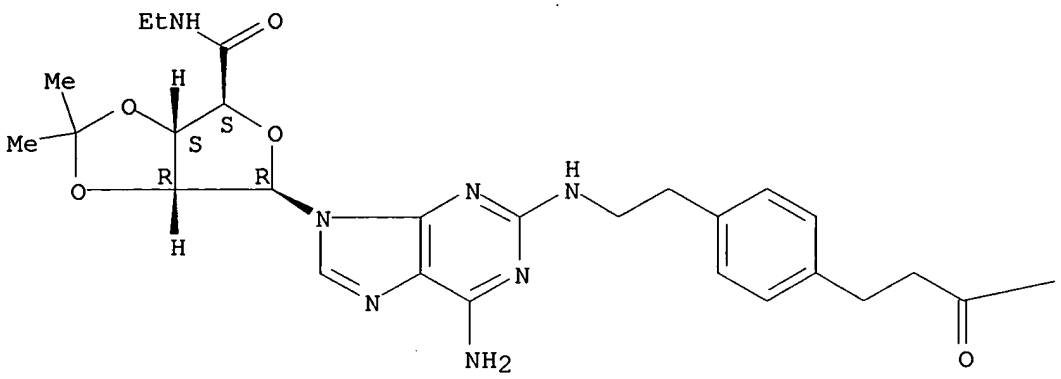
AB The invention concerns a method for measuring myocardial function in a mammal in need of such measurement by: (a) administering 2-substituted adenosine carboxamide derivs. at a dosage rate of less than 1 .mu.g/kg/min, preferably between about 0.01 and 1 .mu.g/kg/min; and then: (b) performing a technique on the mammal to detect myocardial function. The method can be used to diagnose myocardial dysfunction by electrophysiol. anal. or by imaging the vasculature of the heart, esp. under conditions that simulate stress.

IT **120225-76-5**
RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(diagnostic uses of 2-substituted adenosine carboxamides)

RN 120225-76-5 HCAPLUS
CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A




PAGE 1-B

—OBu-t

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:904207 HCAPLUS
DOCUMENT NUMBER: 136:37902
TITLE: Preparation of 2-aminocarbonyl-9H-purine nucleosides and their uses in treatment of respiratory disease, as A2a receptor agonists and anti-inflammatory agents
INVENTOR(S): Mantell, Simon John; Stephenson, Peter Thomas
PATENT ASSIGNEE(S): Pfizer Limited, UK; Pfizer Inc.
SOURCE: PCT Int. Appl., 198 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001094368 | A1 | 20011213 | WO 2001-IB973 | 20010605 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,

RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| US 2002058641 | A1 | 20020516 | US 2001-874007 | 20010605 |
| EP 1292604 | A1 | 20030319 | EP 2001-934242 | 20010605 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| GB 2000-14048 | A | 20000606 |
| GB 2000-18246 | A | 20000725 |
| GB 2000-24920 | A | 20001011 |
| US 2000-214307P | P | 20000627 |
| US 2000-225236P | P | 20000815 |
| US 2000-245243P | P | 20001102 |
| WO 2001-IB973 | W | 20010605 |

OTHER SOURCE(S): MARPAT 136:37902

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

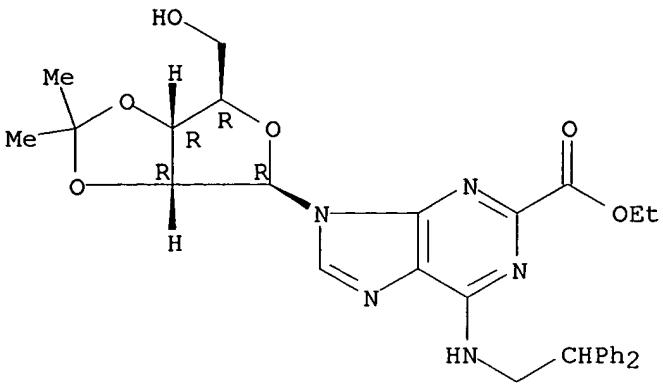
AB 2-Aminocarbonyl-9H-purine nucleosides I wherein R, R2 are independently H, alkyl; R1 is H, substituted alkyl, fluorenyl; R3 is H, alkyl, cycloalkyl, benzyl; R4 is substituted azetidin-3-yl, pyrrolidin-3-yl, piperidin-3-yl, piperidin-4-yl, homopiperidin-3-yl or homopiperidin-4-yl; R3R4 taken together with the nitrogen atom to which they are attached, represent azetidinyl, pyrrolidinyl, piperidinyl, piperazinyl, homopiperidinyl or homopiperazinyl, each being optionally substituted on a ring nitrogen or carbon atom by alkyl or cycloalkyl; R5 is CH2OH, amide; X is substituted alkylene; RX or R2X with the nitrogen atom to which they are attached , represent azetidin-3-yl, pyrrolidin-3-yl, piperidin-3-yl, piperidin-4-yl, homopiperidin-3-yl or homopiperidin-4-yl; Y is CO, CS, SO2, C=N(CN); were prepd. as A2a receptor agonists and anti-inflammatory agents. Thus, nucleoside II was prepd. and tested as A2a receptor agonist and anti-inflammatory agent. Title compds. were tested for biol. activity as A2a receptor agonists and anti-inflammatory agents and all were found to have an IC50 of less than 100 nM.

IT **380222-88-8P 380222-90-2P 380222-92-4P 380222-93-5P 380222-94-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of 2-aminocarbonyl-9H-purine nucleosides and uses in treatment of respiratory disease, as A2a receptor agonists and anti-inflammatory agents)

RN 380222-88-8 HCAPLUS

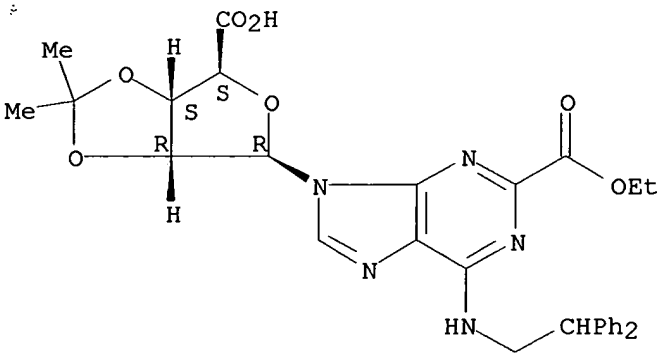
CN 9H-Purine-2-carboxylic acid, 6-[(2,2-diphenylethyl)amino]-9-[2,3-O-(1-methylethylidene)-.beta.-D-ribofuranosyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



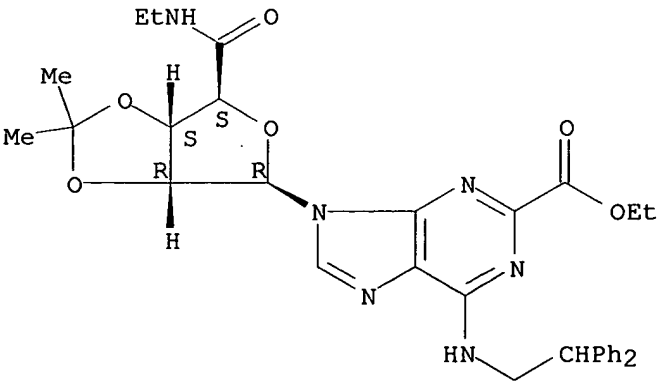
RN 380222-90-2 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-deoxy-1-[6-[(2,2-diphenylethyl)amino]-2-(ethoxycarbonyl)-9H-purin-9-yl]-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



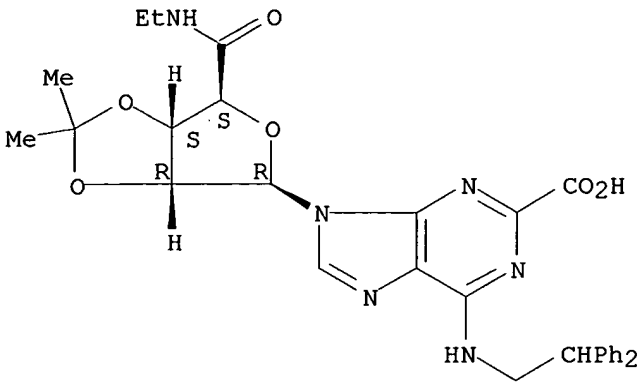
RN 380222-92-4 HCAPLUS
CN 9H-Purine-2-carboxylic acid, 6-[(2,2-diphenylethyl)amino]-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 380222-93-5 HCAPLUS
CN 9H-Purine-2-carboxylic acid, 6-[(2,2-diphenylethyl)amino]-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]- (9CI) (CA INDEX NAME)

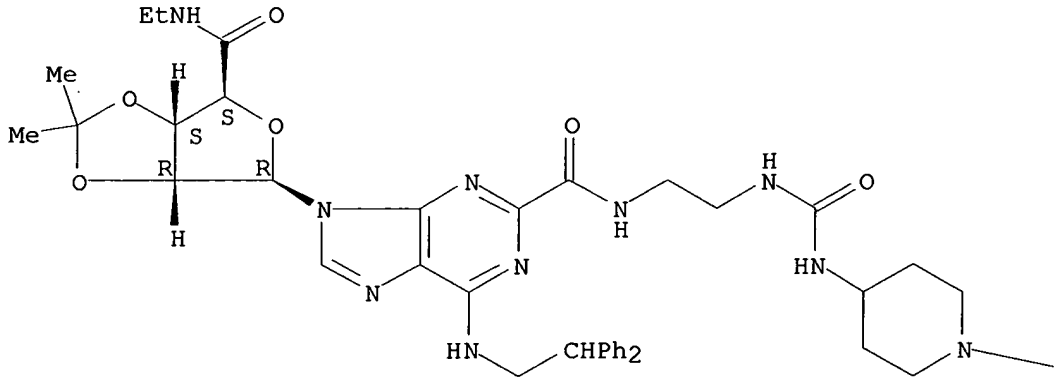
Absolute stereochemistry.

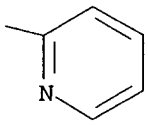



RN 380222-94-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-1-[6-[(2,2-diphenylethyl)amino]-2-[[[2-[[[[1-(2-pyridinyl)-4-piperidinyl]amino]carbonyl]amino]ethyl]amino]carbonyl]-9H-purin-9-yl]-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





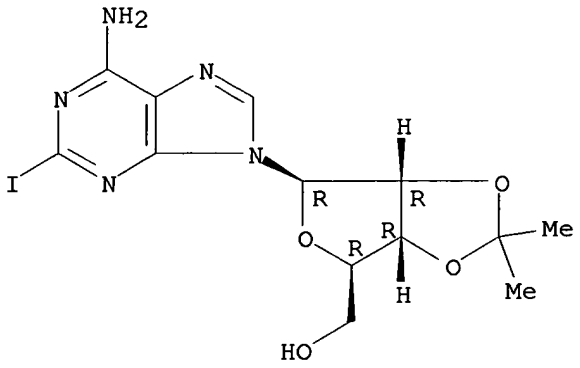

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:911265 HCAPLUS
DOCUMENT NUMBER: 134:66148
TITLE: Induction of pharmacological stress with alkynyladenosine A2A adenosine receptor agonists
INVENTOR(S): Linden, Joel M.; Glover, David K.; Beller, George A.; MacDonald, Timothy
PATENT ASSIGNEE(S): University of Virginia Patent Foundation, USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2000078774 | A2 | 20001228 | WO 2000-US16029 | 20000612 |
| WO 2000078774 | A3 | 20010712 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 2000011725 | A | 20020326 | BR 2000-11725 | 20000612 |
| EP 1194440 | A2 | 20020410 | EP 2000-941335 | 20000612 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2003502433 | T2 | 20030121 | JP 2001-504939 | 20000612 |
| NO 2001005974 | A | 20020214 | NO 2001-5974 | 20011206 |

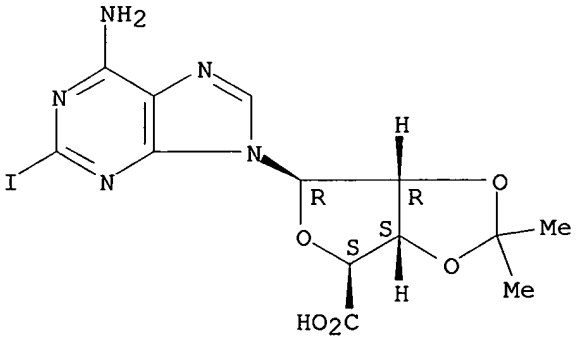
PRIORITY APPLN. INFO.: US 1999-336198 A 19990618
WO 2000-US16029 W 20000612
OTHER SOURCE(S): MARPAT 134:66148
AB A method is provided employing alkynyladenosine A2A adenosine receptor agonists as **vasodilators** to detect the presence and assess the severity of coronary artery stenosis. Prepn. of alkynyladenosine derivs. is also described.
IT **141018-25-9P 141018-26-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; alkynyladenosine A2A adenosine receptor agonist for induction of pharmacol. stress and diagnosis of coronary artery stenosis)
RN 141018-25-9 HCAPLUS
CN Adenosine, 2-iodo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 141018-26-0 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 5 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:34074 HCAPLUS
DOCUMENT NUMBER: 128:188277

TITLE: Adenosine receptor agonists: synthesis and biological evaluation of the diastereoisomers of 2-(3-hydroxy-3-phenyl-1-propyn-1-yl)NECA

AUTHOR(S): Camaioni, Emidio; Di Francesco, Emanuela; Vittori, Sauro; Volpini, Rosaria; Cristalli, Gloria

CORPORATE SOURCE: Dipartimento di Scienze Chimiche, Universita di Camerino, Camerino, 62032, Italy

SOURCE: Bioorganic & Medicinal Chemistry (1997), 5(12), 2267-2275
CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Among the recently reported 2-(ar)alkynyl derivs. of 5'-N-ethylcarboxamidoadenosine (NECA), the (R,S)-2-(3-hydroxy-3-phenyl-1-propyn-1-yl)NECA [(R,S)-PHPNECA or SCH 59761] was found to be a very potent agonist at A1 and A2A receptor subtypes, with a Ki of 2.5 nM and 0.9 nM, resp. Furthermore, this compd. showed an inhibitory activity on platelet aggregation 16-fold higher than NECA, being the most potent anti-aggregatory nucleoside reported so far. Since this compd. bears a chiral carbon in the side chain, the diastereoisomer sepn. was undertaken both by chiral HPLC and by a stereospecific synthetic method. Binding assays have shown that the (S)-diastereomer is about fivefold more potent and selective than the (R)-diastereomer as agonist of the A2A receptor subtype [(S)-PHPNECA, KiA2A = 0.5 nM; (R)-PHPNECA, KiA2A = 2.6 nM]. Functional studies indicated that (S)-PHPNECA possesses marked **vasodilating** activity and produces a relevant decrease in heart rate. Moreover, the (S)-diastereomer proved to be about ten times more potent than the (R)-diastereomer in inducing cardiovascular effects, in in vivo hemodynamic studies. However, the greatest difference between these two enantiomers resulted in the platelet aggregation test: in fact, the (R)-diastereomer displayed an inhibitory activity similar to that of NECA, whereas the (S)-diastereomer was 37-fold more active than NECA as an inhibitor of rabbit platelet aggregation, induced by ADP. These data suggest that (S)-PHPNECA could be a useful tool to investigate the mode of binding of agonists to the platelet adenosine receptor subtype.

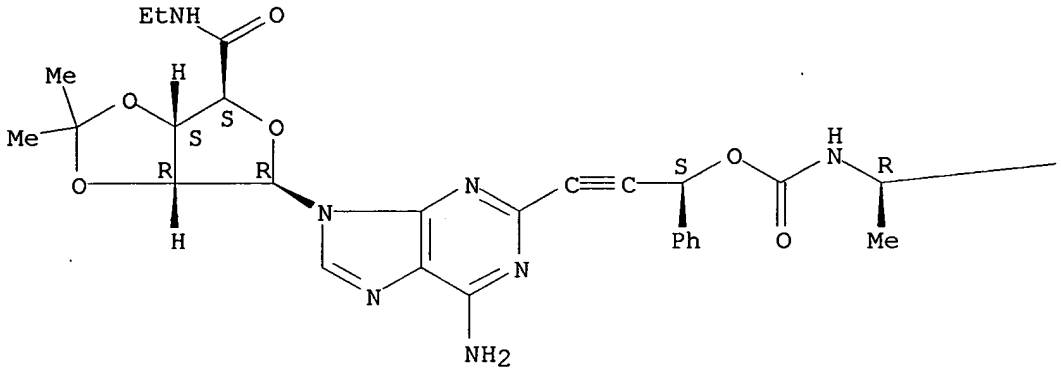
IT **203794-22-3P 203794-23-4P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and biol. evaluation of diastereoisomers of 2-(3-hydroxy-3-phenyl-1-propyn-1-yl)NECA as adenosine receptor agonists)

RN 203794-22-3 HCAPLUS

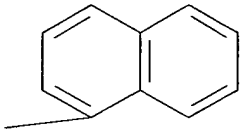
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(3S)-3-[[[[(1R)-1-(1-naphthalenyl)ethyl]amino]carbonyl]oxy]-3-phenyl-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



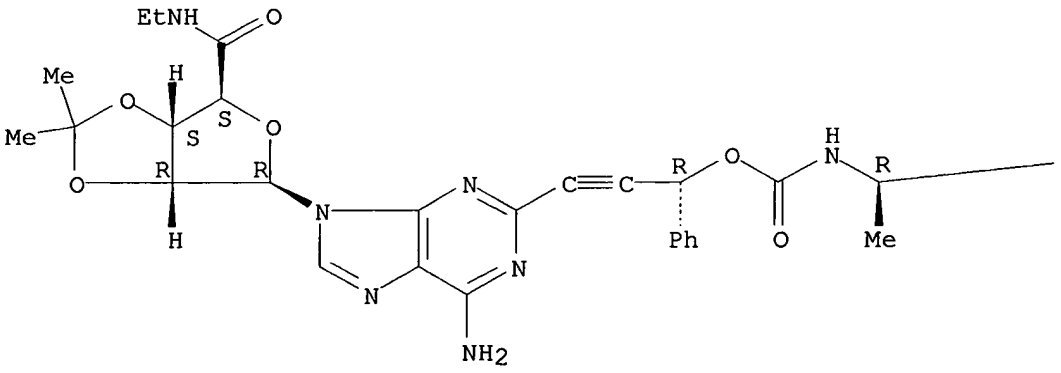
PAGE 1-B



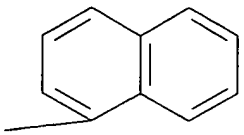
RN 203794-23-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(3R)-3-[[[[(1R)-1-(1-naphthalenyl)ethyl]amino]carbonyl]oxy]-3-phenyl-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

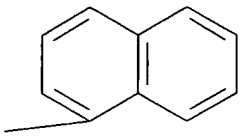
Absolute stereochemistry.

PAGE 1-A



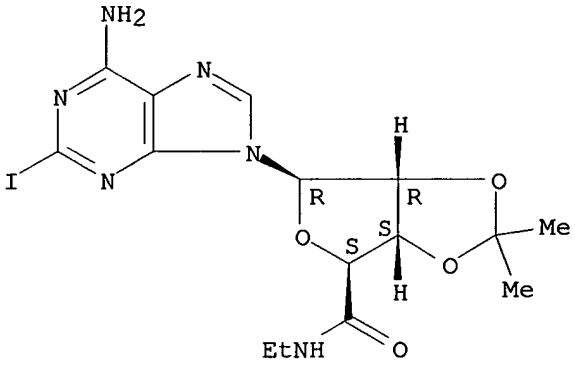
PAGE 1-B





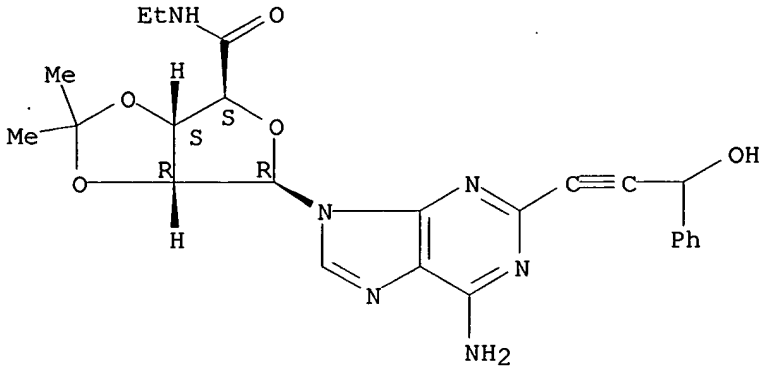
IT **162936-24-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and biol. evaluation of diastereoisomers of 2-(3-hydroxy-3-phenyl-1-propyn-1-yl)NECA as adenosine receptor agonists)
RN 162936-24-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **203794-21-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and biol. evaluation of diastereoisomers of 2-(3-hydroxy-3-phenyl-1-propyn-1-yl)NECA as adenosine receptor agonists)
RN 203794-21-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(3-hydroxy-3-phenyl-1-propynyl)-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

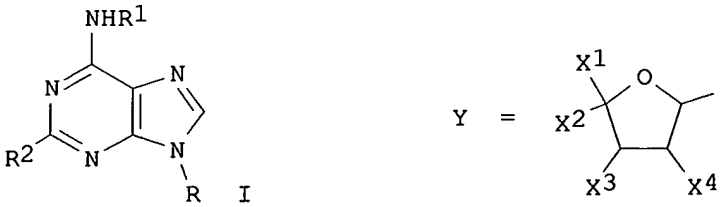


REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 6 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:761605 HCAPLUS
DOCUMENT NUMBER: 128:34983
TITLE: Preparation of nucleosides as A3 adenosine receptor agonists
INVENTOR(S): Jacobson, Kenneth A.; Jeong, Heaok Kim; Siddiqi, Suhaib M.; Johnson, Carl R.; Secrist, John A., III; Tiwari, Kamal N.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: U.S., 35 pp., Cont.-in-part of U.S. Ser. No. 274,628.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 5688774 | A | 19971118 | US 1995-396111 | 19950228 |
| US 5773423 | A | 19980630 | US 1994-274628 | 19940713 |

PRIORITY APPLN. INFO.: US 1993-91109 B2 19930713
US 1993-163324 B2 19931206
US 1994-274628 A2 19940713
OTHER SOURCE(S): MARPAT 128:34983
GI

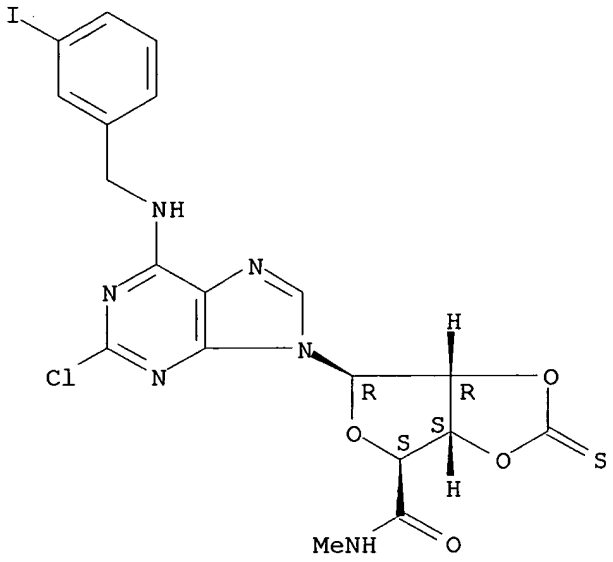


AB Title nucleosides I (R = H, Y; R1 = benzyl, halobenzyl; R2 = H, halo, alkylamino; X1 = H, alkyl; X2 = alkylamido; X3, X4 = independently H, OH,

NH2, N3, halo, Bz) were prepd. as A3 adenosine receptor agonists. The present invention also provides a method of selectively activating an A3 adenosine receptor in a mammal, which method comprises acutely or chronically administering to a mammal in need of selective activation of its A3 adenosine receptor a therapeutically or **prophylactically** effective amt. of a compd. which binds with the A3 receptor so as to stimulate an A3 receptor-dependent response. Thus, N3-(3-iodobenzyl)-9-Me adenine was prepd. and showed an affinity at rat brain adenosine receptors (Ki = 2.23-48.3 .mu.M).

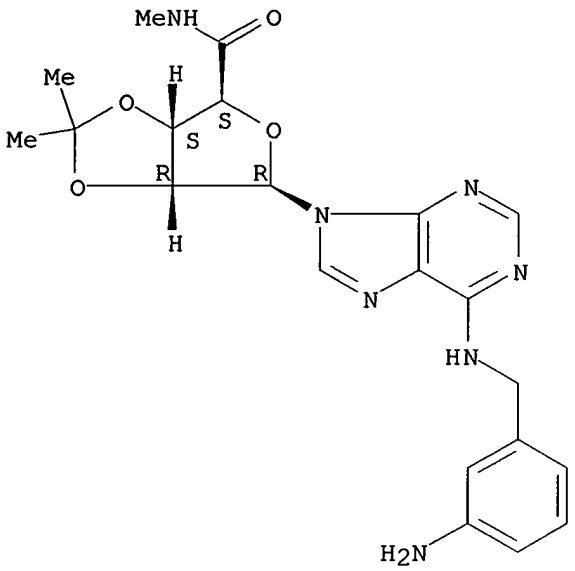
IT **163042-89-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of nucleosides as a adenosine receptor agonists)
RN 163042-89-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-[[(3-iodophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl-, cyclic 2,3-carbonothioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **170966-20-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of nucleosides as a adenosine receptor agonists)
RN 170966-20-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[[(3-aminophenyl)methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

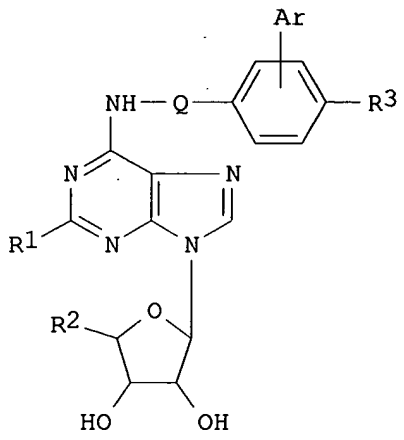
Absolute stereochemistry.




L29 ANSWER 7 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:12370 HCAPLUS
DOCUMENT NUMBER: 126:75189
TITLE: Preparation of N6-(phenylalkyl)adenosine derivatives having selective affinity to adenosine A3 receptor
INVENTOR(S): Mitsuya, Morihiro; Takeshita, Hiroshi; Ihara, Masaki
PATENT ASSIGNEE(S): Banyu Pharma Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 08269083 | A2 | 19961015 | JP 1995-101772 | 19950403 |

PRIORITY APPLN. INFO.: JP 1995-101772 19950403
OTHER SOURCE(S): MARPAT 126:75189
GI



I

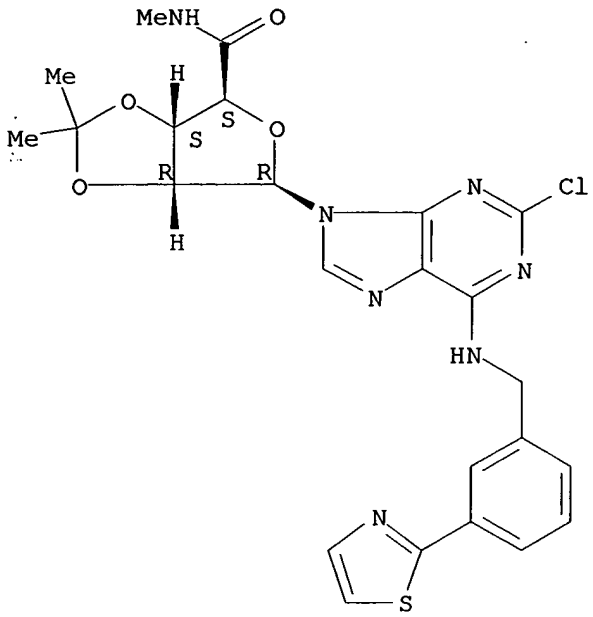
AB The title compds. (I; Ar = Ph, arom. heterocyclyl; Q = lower alkylene; R1 = Cl, lower alkyl, alkoxy, or alkylthio, NR4R5; wherein R4 , R5 = H, lower alkyl; R2 = HOCH2, H2NCO, N-alkylcarbamoyl; R3 = H, OH, NH2, lower alkoxy) or pharmaceutically acceptable salts thereof, which have reduced side effects, are prepd. A remedy for **hypertension**, unstable angina pectoris, acute myocardial infarction, and/or brain nerve disorders contg. I is claimed. Thus, 1-(2,6-dichloro-9H-purin-9-yl)-2,3-O-isopropylidene-.beta.-D-ribofuranuronic acid (prepn. given) was condensed with 3-(2-thiazolyl)benzylamine hydrochloride (prepn. given) in EtOH at room temp. for 15 h and then with methylamine using 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride in CHCl3, followed by treatment with aq. 85% HCO2H, to give the title compd. (II). II showed Ki (competitive binding inhibition const.) of 6,990 and 1.00 for adenosine A1 receptor prepn. from rat homogenized brain and adenosine A3 receptor of Rat basophilic leukemia mast cells (RBL-2H3), resp.

IT **184847-93-6P 184847-94-7P 184847-95-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of N6-(phenylalkyl)adenosine derivs. having selective affinity to adenosine A3 receptor for disease treatment)

RN 184847-93-6 HCAPLUS

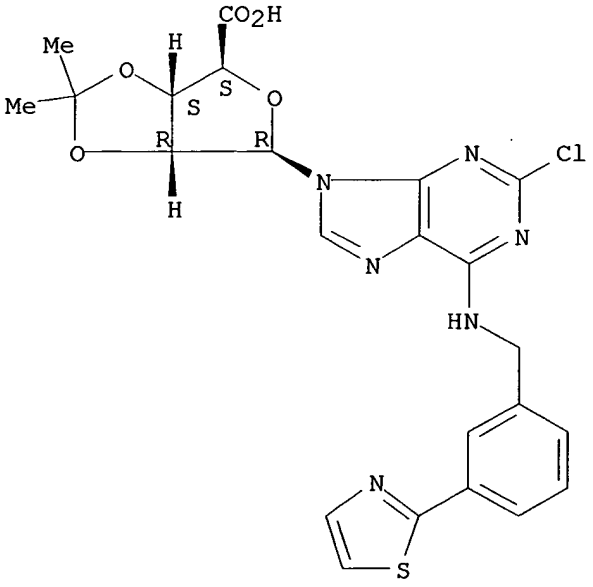
CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-[[[3-(2-thiazolyl)phenyl]methyl]amino]-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



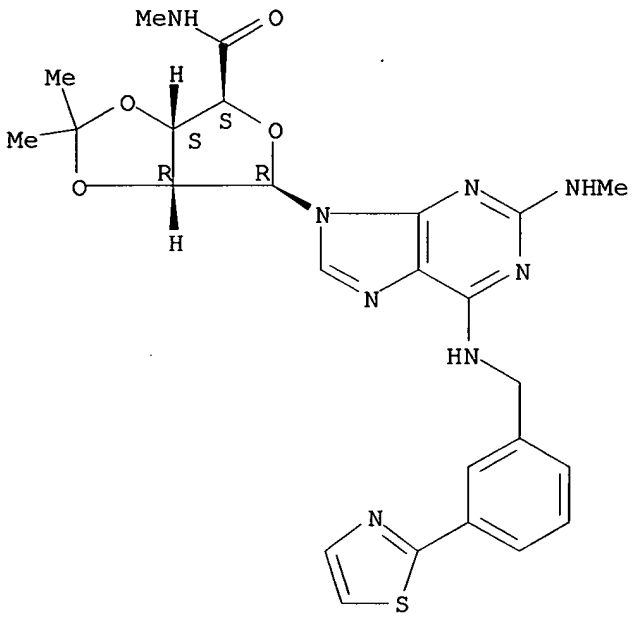
RN 184847-94-7 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-[2-chloro-6-[[[3-(2-thiazolyl)phenyl]methyl]amino]-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 184847-95-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-methyl-1-[2-(methylamino)-6-[[[3-(2-thiazolyl)phenyl]methyl]amino]-9H-purin-9-yl]-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L29 ANSWER 8 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:616599 HCAPLUS
DOCUMENT NUMBER: 125:317355
TITLE: Preparation of adenosine derivatives having antihypertensive, cardioprotective, anti-**ischemic** and antilipolytic properties
INVENTOR(S): Spada, Alfred P.; Fink, Cynthia A.; Myers, Michael R.
PATENT ASSIGNEE(S): Rhone-Poulenc Rorer Pharmaceuticals Inc., USA
SOURCE: U.S., 27 pp., Cont.-in-part of U. S. Ser. No. 229,882, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 5561134 | A | 19961001 | US 1994-316761 | 19941003 |
| US 5364862 | A | 19941115 | US 1992-955783 | 19921002 |
| CA 2188147 | AA | 19951026 | CA 1995-2188147 | 19950419 |
| CA 2188147 | C | 20010403 | | |
| WO 9528160 | A1 | 19951026 | WO 1995-US4800 | 19950419 |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA, UG | | | | |
| RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9522949 | A1 | 19951110 | AU 1995-22949 | 19950419 |

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|---|---|---|---|---|---|
| AU 684635 | B2 | 19971218 | | | |
| EP 758897 | A1 | 19970226 | EP 1995-916451 | 19950419 | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | | |
| CN 1148811 | A | 19970430 | CN 1995-193170 | 19950419 | |
| CN 1086704 | B | 20020626 | | | |
| HU 75331 | A2 | 19970528 | HU 1996-2829 | 19950419 | |
| BR 9507327 | A | 19971007 | BR 1995-7327 | 19950419 | |
| JP 09512020 | T2 | 19971202 | JP 1995-527171 | 19950419 | |
| EP 1006115 | A2 | 20000607 | EP 2000-103467 | 19950419 | |
| EP 1006115 | A3 | 20000628 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE | | | | | |
| RU 2166319 | C2 | 20010510 | RU 1996-121567 | 19950419 | |
| NZ 284357 | A | 20010629 | NZ 1995-284357 | 19950419 | |
| CZ 289528 | B6 | 20020213 | CZ 1996-3032 | 19950419 | |
| PL 182942 | B1 | 20020531 | PL 1995-316961 | 19950419 | |
| US 5736554 | A | 19980407 | US 1995-455361 | 19950531 | |
| US 5652366 | A | 19970729 | US 1995-484811 | 19950607 | |
| NO 9604438 | A | 19961018 | NO 1996-4438 | 19961018 | |
| FI 9604218 | A | 19961217 | FI 1996-4218 | 19961018 | |
| CZ 290897 | B6 | 20021113 | CZ 2001-2885 | 20010808 | |

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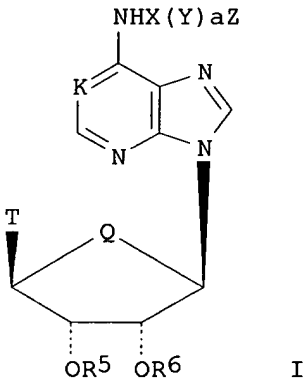
|---|---|---|---|
| PRIORITY APPLN. INFO.: | US 1990-587884 | B2 | 19900925 |
| | US 1992-955783 | A2 | 19921002 |
| | US 1994-229882 | B2 | 19940419 |
| | US 1994-316761 | A | 19941003 |
| | CZ 1996-3032 | A3 | 19950419 |
| | EP 1995-916451 | A3 | 19950419 |
| | WO 1995-US4800 | W | 19950419 |

OTHER SOURCE(S): MARPAT 125:317355

GI



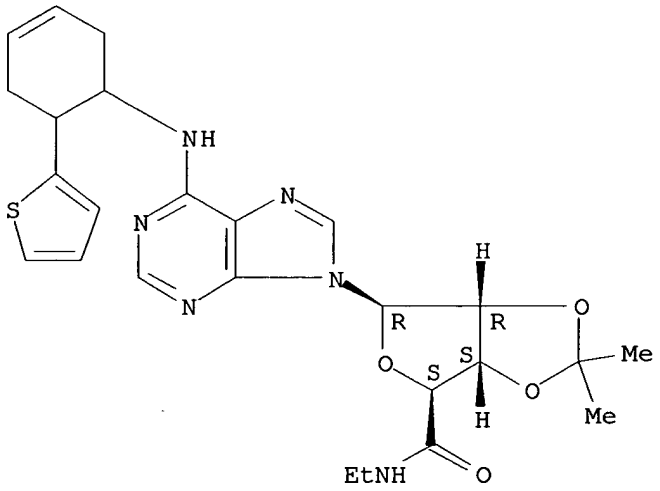

I

AB The adenosine derivs. I [K = N or NO; Q = CH2 or O; T = R1R2NCO or R3OCH2 ; X = (un)substituted alkylene, cycloalkylene or cycloalkenylene Y = NR4, O or S; a = 0 or 1; Z = substituted pyrrolyl, pyrazolyl, indolyl, etc.; R1-5 = H, alkyl, aryl or heterocyclyl; R5,R6 = H, alkyl, aralkyl, etc.] are prepd. as antihypertensive, cardioprotective, antiischemic, and antilipolytic agents.

IT **165115-09-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(intermediate in prepn. of adenosine deriv. drug)
RN 165115-09-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[6-(2-thienyl)-3-cyclohexen-1-yl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L29 ANSWER 9 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:997439 HCAPLUS
DOCUMENT NUMBER: 124:202956
TITLE: Preparation of adenosine derivatives having antihypertensive, cardioprotective, anti-**ischemic** and antilipolytic properties.
INVENTOR(S): Spada, Alfred P.; Fink, Cynthia A.; Myers, Michael R.
PATENT ASSIGNEE(S): Rhone-Poulenc Rorer Pharmaceuticals Inc., USA
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9528160 | A1 | 19951026 | WO 1995-US4800 | 19950419 |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA, UG | | | | |
| RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 5561134 | A | 19961001 | US 1994-316761 | 19941003 |
| AU 9522949 | A1 | 19951110 | AU 1995-22949 | 19950419 |
| AU 684635 | B2 | 19971218 | | |

| | | | | | |
|---|---|---|---|---|---|
| EP 758897 | A1 | 19970226 | EP 1995-916451 | | 19950419 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | | |
| BR 9507327 | A | 19971007 | BR 1995-7327 | | 19950419 |
| JP 09512020 | T2 | 19971202 | JP 1995-527171 | | 19950419 |
| RU 2166319 | C2 | 20010510 | RU 1996-121567 | | 19950419 |
| NZ 284357 | A | 20010629 | NZ 1995-284357 | | 19950419 |
| PL 182942 | B1 | 20020531 | PL 1995-316961 | | 19950419 |
| NO 9604438 | A | 19961018 | NO 1996-4438 | | 19961018 |
| FI 9604218 | A | 19961217 | FI 1996-4218 | | 19961018 |
| PRIORITY APPLN. INFO.: | | | US 1994-229882 | A | 19940419 |
| | | | US 1994-316761 | A | 19941003 |
| | | | US 1990-587884 | B2 | 19900925 |
| | | | US 1992-955783 | A2 | 19921002 |
| | | | WO 1995-US4800 | W | 19950419 |

OTHER SOURCE(S): MARPAT 124:202956

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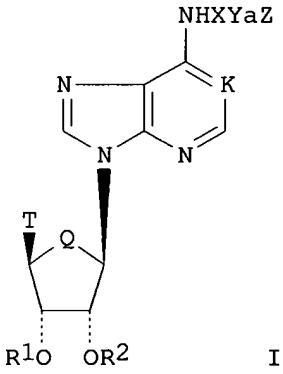


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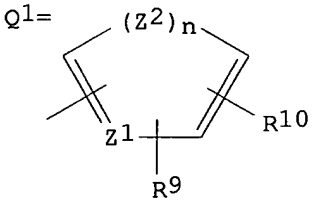
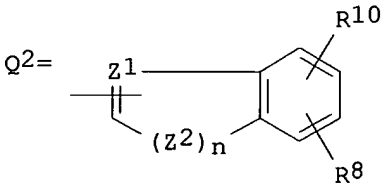
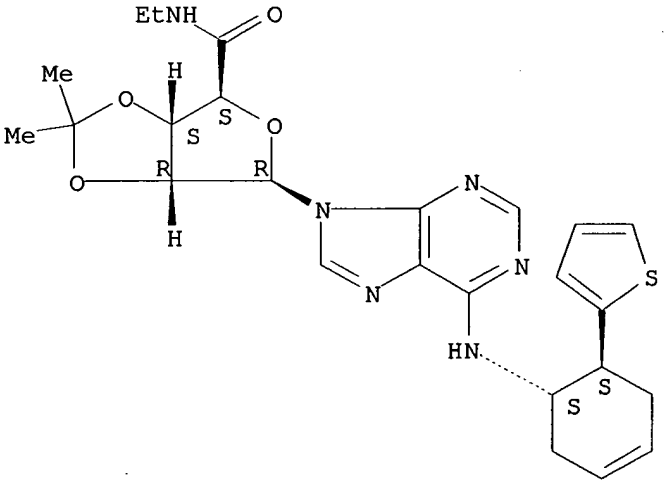



AB Title compds. [I; K = N, NO, CH; Q = CH2, O; T = R3R4NCO, R5OCH2; X = (substituted) alkylene, cycloalkylene, cycloalkenylene; Y = NR6, O, S; a = 0, 1; R1, R2 = H, alkyl, aralkyl, carbamoyl, acyl, alkoxycarbonyl, aralkoxycarbonyl, aryloxycarbonyl; R1R2 = CO, CS, etc.; R3-R8 = H, alkyl, aryl, heterocyclyl; Z = Q1, Q2; Z1 = N, CR7, (CH)mC5, (CH)mN; m = 1, 2; Z2 = N, NR8, O, S; n = 0, 1; R9, R10 = H, OH, alkyl, hydroxyalkyl, alkylmercapto, thioalkyl, alkoxy, amino, acyl, halo, carbamoyl, etc.], were prepd. Thus, trans-2-(2-thienyl)cyclohex-4-enylamine, 6-chloropurine, and Et3N were refluxed in EtOH to give N6-[trans-2-(2-thienyl)-cyclohex-4-enyl]adenosine. The latter bound to adenosine A1 and A2 receptors with IC50 = 1.66 nM and 55 nM, resp., and induced vasorelaxation in swine coronary artery with IC50 = 0.73 .mu.M.

IT **173935-07-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of adenosine derivs. having antihypertensive, cardioprotective, anti-**ischemic** and antilipolytic properties)
RN 173935-07-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[6-(2-thienyl)-3-cyclohexen-1-yl]amino]-9H-purin-9-yl]-, (1S-trans)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



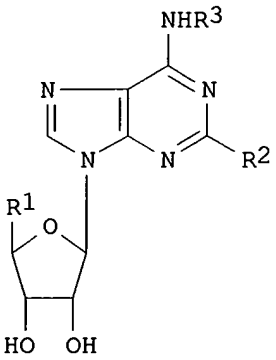

L29 ANSWER 10 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:837438 HCAPLUS
DOCUMENT NUMBER: 123:257265
TITLE: Preparation of N6-benzyladenosine-5'-uronamides, modified xanthine ribosides, and related compounds as adenosine A3 receptor agonists.
INVENTOR(S): Jacobson, Kenneth A.; Gallo-Rodriguez, Carola; Von Galen, Philip J. M.; Von Lubitz, Dag K. J. E.; Jeong, Heaok Kim
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 175 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9502604 | A1 | 19950126 | WO 1994-US7835 | 19940713 |
| W: AU, CA, JP | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| AU 9473310 | A1 | 19950213 | AU 1994-73310 | 19940713 |
| EP 708781 | A1 | 19960501 | EP 1994-923445 | 19940713 |
| EP 708781 | B1 | 20011004 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

AT 206432 E 20011015 AT 1994-923445 19940713
PRIORITY APPLN. INFO.: US 1993-91109 A 19930713
US 1993-163324 A 19931206
WO 1994-US7835 W 19940713
OTHER SOURCE(S): MARPAT 123:257265

GI



I

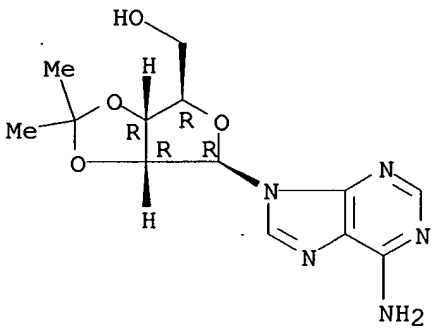
AB Title compds. [I; R1 = RaRbNCO, HORc; Ra, Rb = H, alkyl, amino, haloalkyl, aminoalkyl, cycloalkyl, BOC-aminoalkyl; RaRbN = heterocyclyl; Rc = alkyl, amino, haloalkyl, aminoalkyl, cycloalkyl, BOC-aminoalkyl; R2 = H, halo, alkyl ether residue, amino, alkylamino, alkenyl, alkynyl, thio, alkylthio; R3 = (R)- and (S)-1-phenylethyl, (substituted) PhCH2, substituted phenylethyl] and related compds., were prepd. Thus, 2-chloro-N6-(3-iodobenzyl)adenine was refluxed with hexamethyldisilazane and cat. (NH4)2SO4 to give a silyl deriv. which was refluxed with N-Me I-O-acetyl-2,3-dibenzoyl-.alpha.,.beta.-D-ribofuronamide and trimethylsilyl triflate in dichloroethane to give 2-chloro-N6-(3-iodobenzyl)-9-[5-(methylamido)-2,3-di-O-benzoyl-.beta.-D-ribofuranosyl]adenine. The latter was stirred with NH3 in MeOH for 16 h to give 68.7% 2-chloro-N6-(3-iodobenzyl)-9-[5-(methylamido)-.beta.-D-ribofuranosyl]adenine. This showed Ki = 0.23 nM in a radioligand binding assay at rat brain A3 receptors.

IT **362-75-4**, 2',3'-Isopropylideneadenosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of N6-benzyladenosine-5'-uronamides, modified xanthine ribosides, and related compds. as adenosine A3 receptor agonists)

RN 362-75-4 HCAPLUS

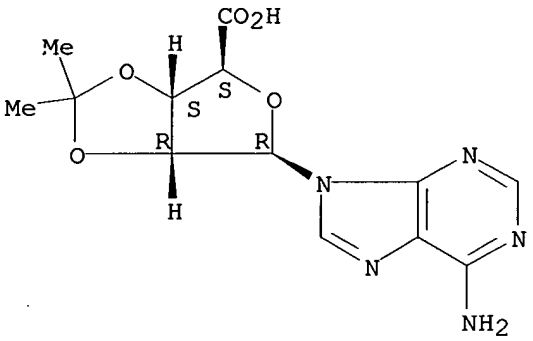
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



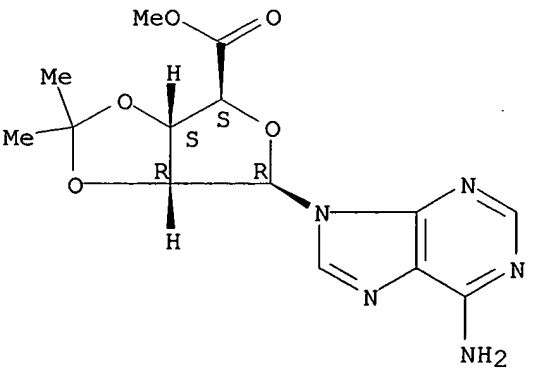
IT **19234-66-3P 23754-29-2P 152918-54-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of N6-benzyladenosine-5'-uronamides, modified xanthine ribosides, and related compds. as adenosine A3 receptor agonists)
RN 19234-66-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

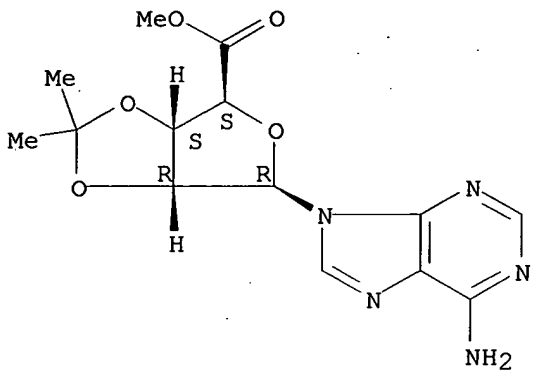
Absolute stereochemistry.



RN 23754-29-2 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

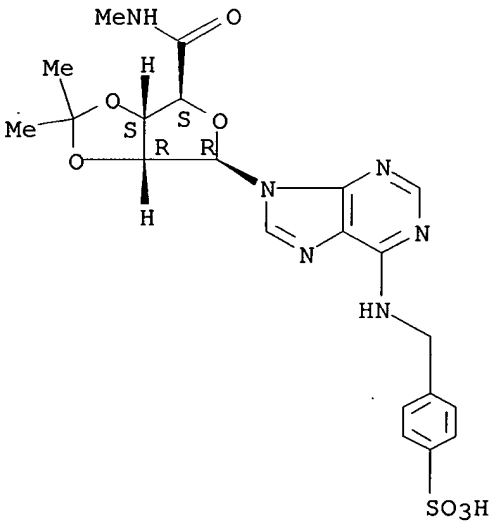
Absolute stereochemistry.





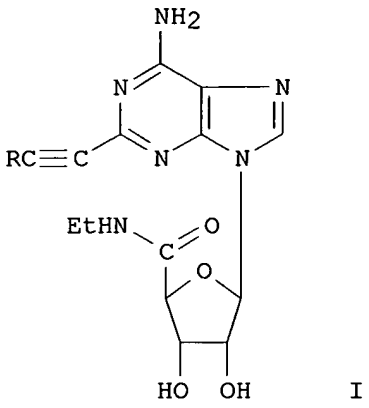
RN 152918-54-2 HCAPLUS
CN Benzenesulfonic acid, 4-[[[9-[N-methyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-6-yl]amino]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 11 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:508300 HCAPLUS
DOCUMENT NUMBER: 122:291434
TITLE: 2-Aralkynyl and 2-Heteroalkynyl Derivatives of Adenosine-5'-N-Ethyluronamide as Selective A2a Adenosine Receptor Agonists
AUTHOR(S): Cristalli, Gloria; Camaioni, Emidio; Vittori, Sauro; Volpini, Rosaria; Borea, Pier Andrea; Conti, Annamaria; Dionisotti, Silvio; Ongini, Ennio; Monopoli, Angela
CORPORATE SOURCE: Dipartimento di Scienze Chimiche, Universita di Camerino, Camerino, 62032, Italy
SOURCE: Journal of Medicinal Chemistry (1995), 38(9), 1462-72
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

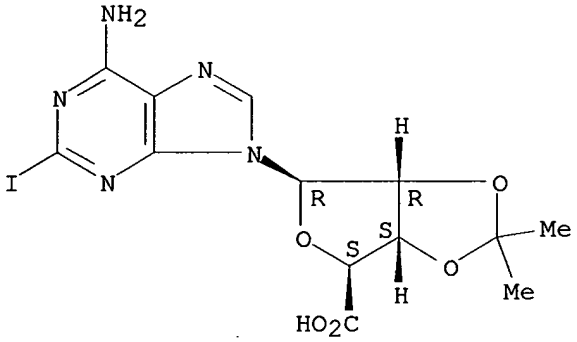
AB A series of new 2-aralkynyl and 2-heteroaralkynyl derivs. of 5'-(N-carboxamido)adenosine NECA, e.g. I [R = H, Ph, C6H4R1-4, 2-pyridyl, 2-furyl, 2-thiazolyl; R1 = Me, OMe, OH, NH2, F], were synthesized and studied in binding and functional assays to assess their potency for the A2a compared to A1 adenosine receptors. Compds. bearing an arom. or heteroarom. ring, conjugated to the triple bond, showed generally weaker activity at the A2a receptor and lower selectivity (A2a vs A1) than the alkylalkynyl derivs. previously reported. However, the (4-formylphenyl)ethynyl deriv. showed affinity in the low nanomolar range and high selectivity (about 160-fold) for the A2a receptor. The presence of heteroatoms improved vasorelaxant activity, I (R = 2-thiazolyl) being the most potent in the series. Introduction of methylene groups between the triple bond and the Ph ring favored the A2a binding affinity, and the 5-phenyl-1-pentynyl deriv. was found to be highly potent and selective (about 180-fold) at A2a receptors. With regard to platelet activity, the presence of arom. or heteroarom. rings decreased the potency in comparison with that of NECA and of N-ethyl-1'-deoxy-1'-(6-amino-2-hexynyl-9H-purin-9-yl)-.beta.-D-ribofuranuronamide (HENECA). Introduction of a methylene group was effective in increasing antiaggregatory potency only when this group is linked to a heteroatom. From these data and those previously reported, the structure-activity relationships derived for the 2-alkynyl-substituted ribose uronamides would indicate that selective potentiation of A2a receptor affinity could be obtained by arom. rings not conjugated with the triple bond or by heteroarom. groups. As for A2a receptors on platelets, the presence of arom. rings, either conjugated or unconjugated to the triple bond, is detrimental for the antiaggregatory activity. Some of the compds. included in this series retain interesting **vasodilating** properties and merit further investigation for their potential in the treatment of cardiovascular disorders.

IT **141018-26-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of aralkynyl and heteroalkynyl derivs. of carboxamidoadenosine as selective A2a adenosine receptor agonists)

RN 141018-26-0 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-

2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

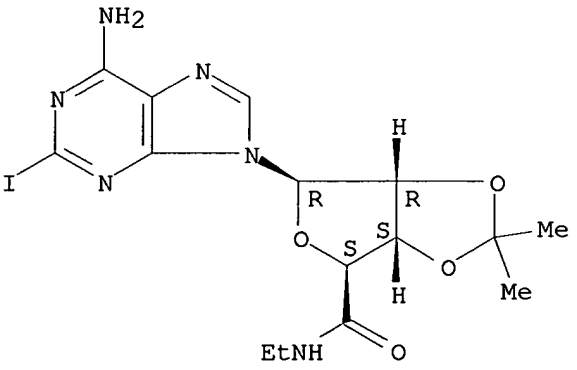


IT **162936-24-5P 162936-39-2P 162936-40-5P**
**162936-41-6P 162936-42-7P 162936-43-8P**
**162936-44-9P 162936-45-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of aralkynyl and heteroalkynyl derivs. of carboxamidoadenosine as selective A2a adenosine receptor agonists)

RN 162936-24-5 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

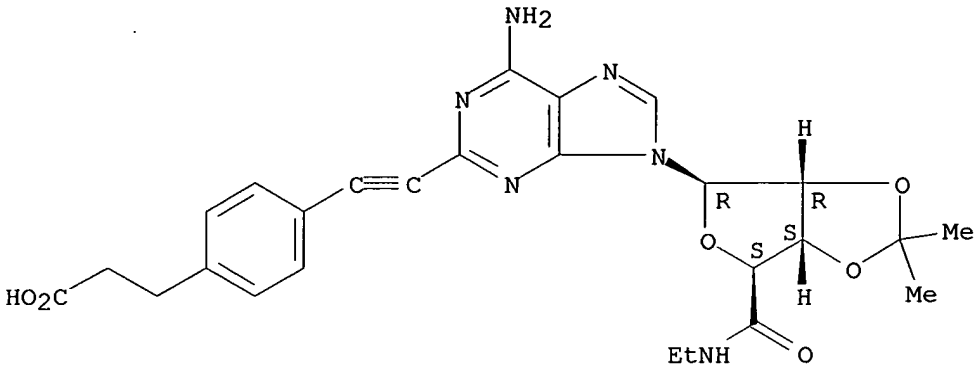
Absolute stereochemistry.



RN 162936-39-2 HCAPLUS

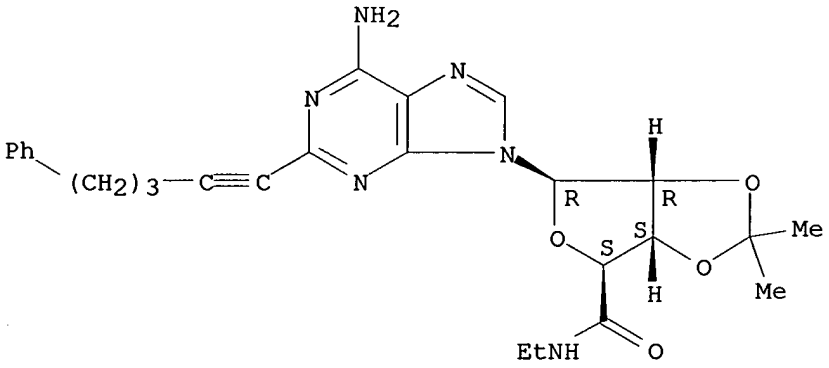
CN Benzenepropanoic acid, 4-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]ethynyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



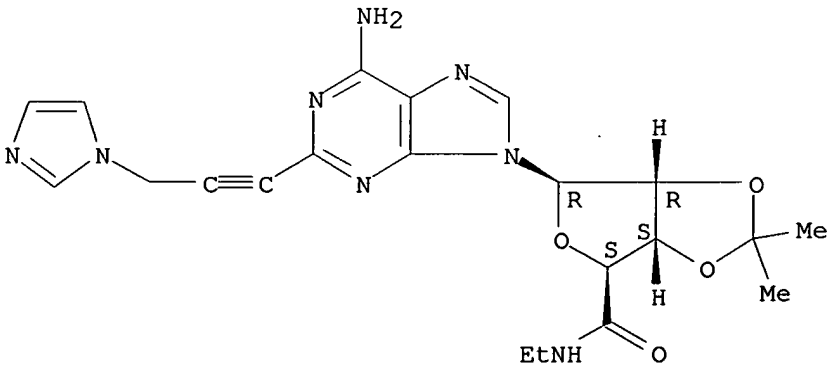
RN 162936-40-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(5-phenyl-1-pentynyl)-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



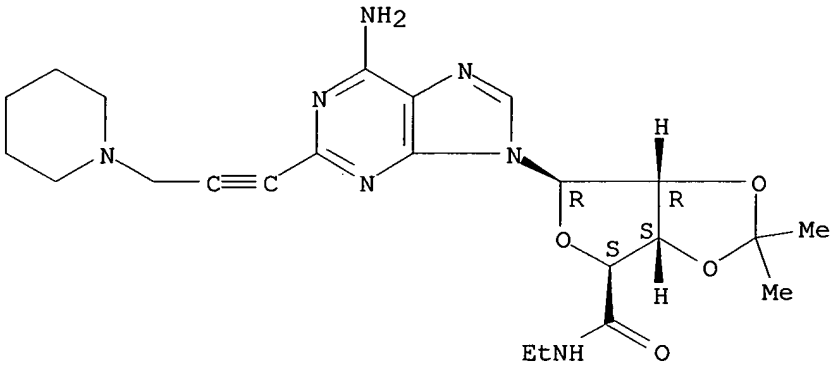
RN 162936-41-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[3-(1H-imidazol-1-yl)-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



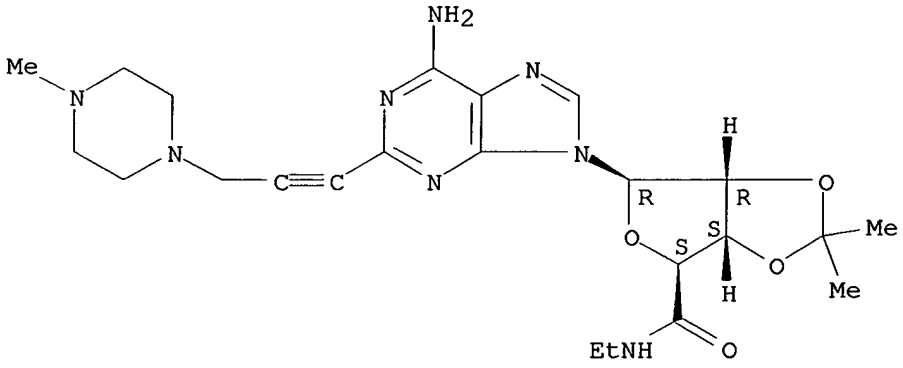
RN 162936-42-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[3-(1-piperidinyl)-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



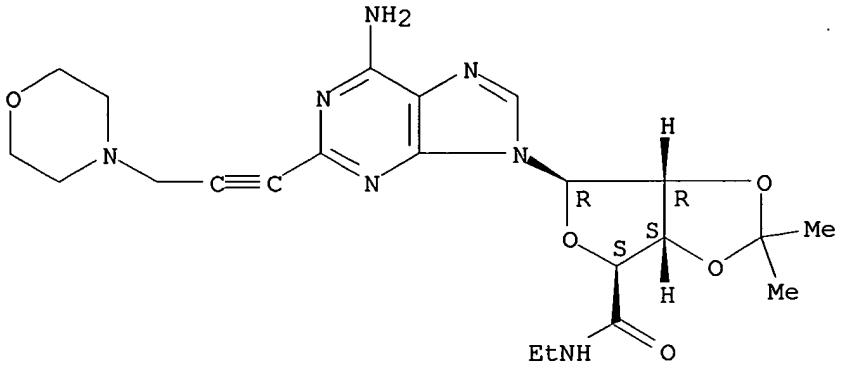

RN 162936-43-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[3-(4-methyl-1-piperazinyl)-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



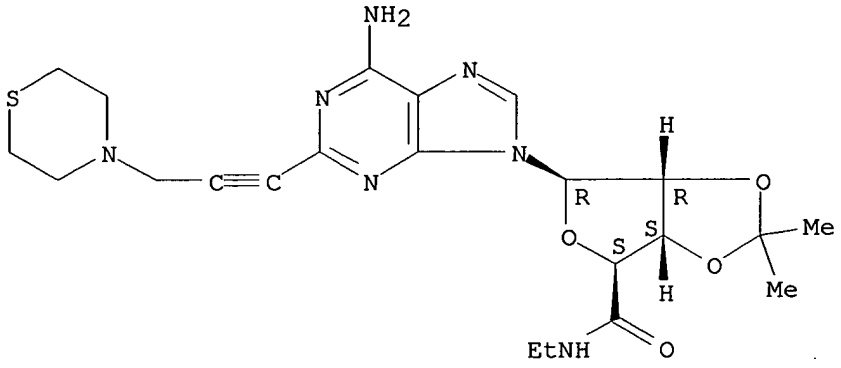

RN 162936-44-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[3-(4-morpholinyl)-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 162936-45-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[3-(4-thiomorpholinyl)-1-propynyl]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

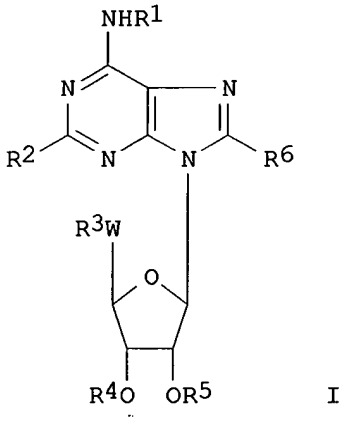


L29 ANSWER 12 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:346678 HCAPLUS
DOCUMENT NUMBER: 122:106395
TITLE: preparation of adenosine sulfohydrocarbon radicals for treatment of **ischemia** or hypoxia in mammals
INVENTOR(S): Jacobson, Kenneth A.; Maillard, Michel C.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9402497 | A1 | 19940203 | WO 1993-US6590 | 19930713 |

W: AU, CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9347724 A1 19940214 AU 1993-47724 19930713
US 5498605 A 19960312 US 1994-278704 19940721
PRIORITY APPLN. INFO.: US 1992-914428 A 19920715
WO 1993-US6590 W 19930713
OTHER SOURCE(S): MARPAT 122:106395
GI

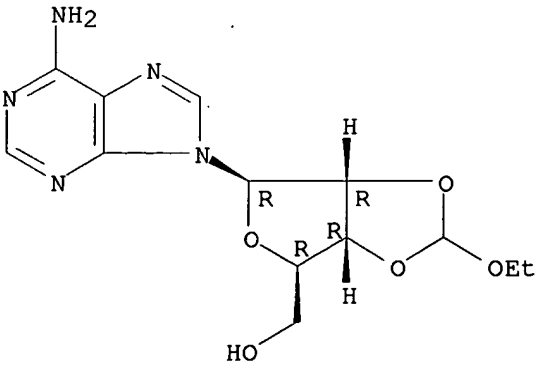


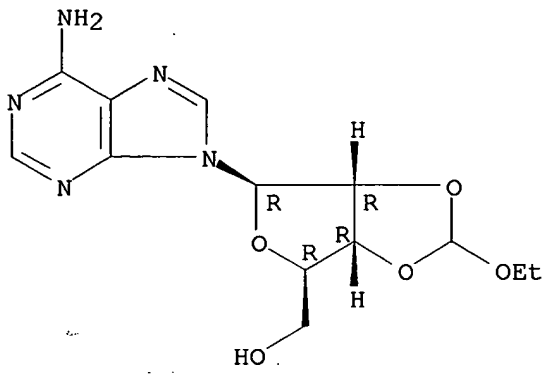
I

AB The adenosine derivs., e.g. I, wherein at least one of R1-R6 is a sulfohydrocarbon radical, the remaining R groups are non-sulfohydrocarbon radicals, and W is -OCH2-, -NHCH2-, -SCH2-, or -NH(CO)-. Thus, 6-chloropurine riboside reacted with sulfonylamine in BuOH and NEt3 gave N6-p-sulfophenyladenosine. Methods of prepg. such compds., as well as methods of using such compds. to treat **ischemia** or hypoxia in mammals and pharmaceutical compns. contg. such compds. as the active ingredients, are also described. Binding of I with A1 and A2 adenosine receptors at rat brain is reported.

IT **3250-02-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of adenosine sulfohydrocarbon radicals)
RN 3250-02-0 HCAPLUS
CN Adenosine, 2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



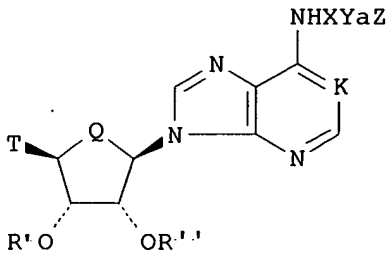


L29 ANSWER 13 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:261298 HCAPLUS
DOCUMENT NUMBER: 123:228787
TITLE: Preparation of adenosine analogs as antihypertensives and antiischemics.
INVENTOR(S): Spada, Alfred P.; Fink, Cynthia A.; Myers, Michael R.
PATENT ASSIGNEE(S): Rhone-Poulenc Rorer Pharmaceuticals Inc., USA
SOURCE: U.S., 25 pp. Cont.-in-part of U.S. Ser. No. 587,884, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

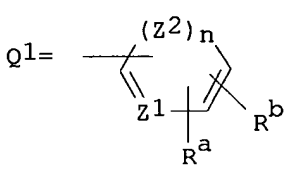
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 5364862 | A | 19941115 | US 1992-955783 | 19921002 |
| CA 2092305 | AA | 19920326 | CA 1991-2092305 | 19910925 |
| AT 147074 | E | 19970115 | AT 1991-917927 | 19910925 |
| ES 2095960 | T3 | 19970301 | ES 1991-917927 | 19910925 |
| SG 80526 | A1 | 20010522 | SG 1996-3118 | 19910925 |
| US 5561134 | A | 19961001 | US 1994-316761 | 19941003 |
| US 5736554 | A | 19980407 | US 1995-455361 | 19950531 |
| US 5652366 | A | 19970729 | US 1995-484811 | 19950607 |

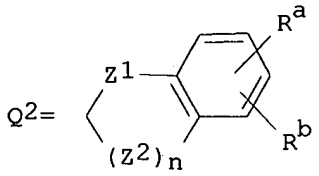
PRIORITY APPLN. INFO.: US 1990-587884 B2 19900925
US 1992-955783 A2 19921002
US 1994-229882 B2 19940419
US 1994-316761 A1 19941003

OTHER SOURCE(S): MARPAT 123:228787
GI




I



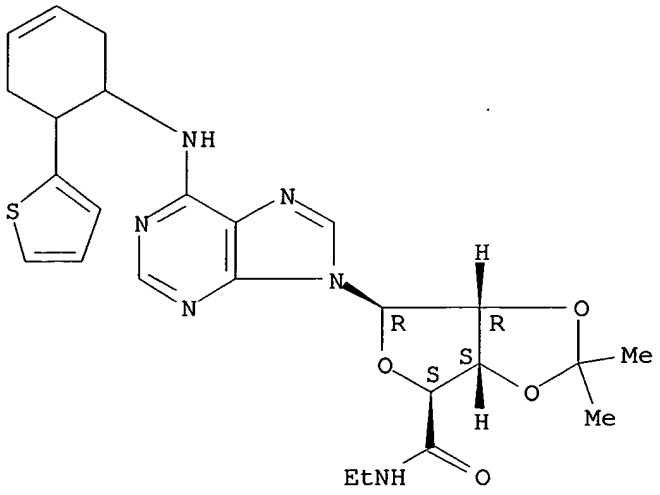

AB Title compds. [I; K = N, NO, CH; Q = CH2, O; T = R2, R1R2NCO, R3OCH2; X = alkylene, cycloalkylene, cycloalkenylene; Y = NR4, O, S; a = 0, 1; Z = Q1, Q2; Z1 = N, CR5, (CH)mCR5, (CH)mN; m = 1, 2; Z2 = N, NR6, O, S; n = 0, 1; R1-R6 = H, alkyl, aryl, heterocyclyl; Ra, Rb = H, OH, alkyl, hydroxyalkyl, alkylmercaptyl, thioalkyl, alkoxy, alkoxyalkyl amino, alkylamino, carboxyl, acyl halo, carbamoyl, alkylcarbamoyl, aryl, heterocyclyl; R', R'' = H, alkyl, aralkyl, carbamoyl, alkylcarbamoyl, dialkylcarbamoyl, acyl, alkoxycarbonyl, aralkoxycarbonyl, aryloxycarbonyl; R'R'' = CO, CS, CHORc, CRdRe; Rc, Rd, Re = H, alkyl; RdRe = atoms to form a cycloalkyl ring; with provisos], were prepd. Thus, N6-[trans-2-(thiophen-2-yl)cyclohex-1-yl]adenosine, prepd. from 6-chloropurine riboside and the corresponding amine, at 5 mg/kg orally in rats reduced mean arterial blood pressure and heart rate by 45% and 22%, resp.

IT **165115-09-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of adenosine analogs as antihypertensives and antiischemics)

RN 165115-09-3 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)-1-[6-[[6-(2-thienyl)-3-cyclohexen-1-yl]amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



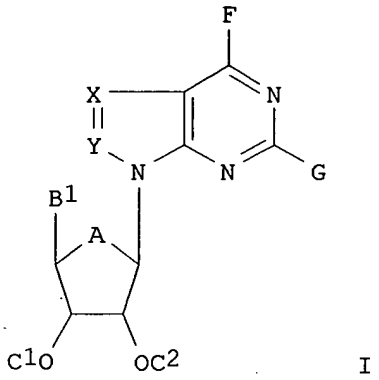

L29 ANSWER 14 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:621999 HCAPLUS
DOCUMENT NUMBER: 121:221999
TITLE: Preparation of adenosine kinase-inhibiting purine nucleoside analogs as antiinflammatory agents
INVENTOR(S): Firestein, Gary Steven; Ugarkar, Bheemarao Ganapatrao; Miller, Leonard Paul; Gruber, Harry Edward; Bullough, David Andrew; Erion, Mark David; Castellino, Angelo John
PATENT ASSIGNEE(S): Gensia, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 14
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9417803 | A1 | 19940818 | WO 1994-US1340 | 19940203 |
| W: AT, AU, BB, BG, BR, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9462365 | A1 | 19940829 | AU 1994-62365 | 19940203 |
| EP 682519 | A1 | 19951122 | EP 1994-909558 | 19940203 |
| R: CH, DE, FR, GB, IT, LI | | | | |
| US 5646128 | A | 19970708 | US 1994-349125 | 19941201 |

PRIORITY APPLN. INFO.:
US 1993-14190 A 19930203
US 1989-408707 B2 19890915
US 1990-466979 B2 19900118
US 1991-647117 B2 19910123
US 1991-812916 B2 19911223
US 1994-192645 B1 19940203
WO 1994-US1340 W 19940203

OTHER SOURCE(S): MARPAT 121:221999

GI



I

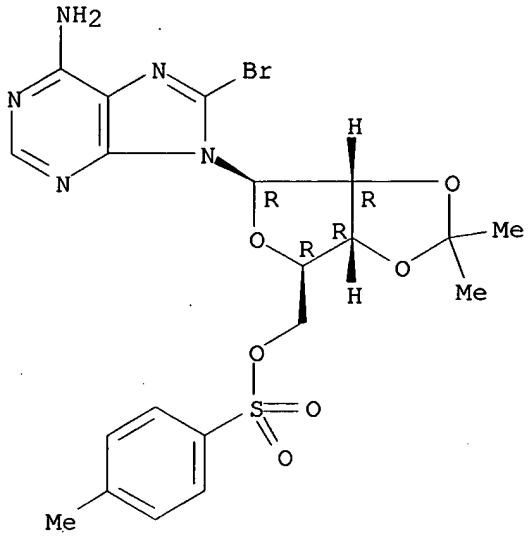
AB Novel nucleosides I [A = O, CH2, S; B' = (CH2)nB, alkenyl, alkynyl; B = H, alkyl, alkoxy, NH2, alkylamino, etc.; C1, C2 = H, acyl, hydrocarbyloxycarbonyl, or C1C2 = C(:O), .alpha.-alkoxyalkylidene; X = CD; D = H, halo, alkyl, cyano, CO2H, etc.; Y = N, CE; E = H, halo, alkyl, alkylthio; F = alkyl, aryl, halo, cyano, indolyl, pyrrolidinyl, etc.; G = H, halo, alkyl, alkoxy, alkylamino, alkylthio; n = 1-4], prepd. by multistep procedures which are described, selectively inhibit adenosine kinase and are useful in treatment of conditions characterized by an inflammatory response. Such conditions include sepsis, arthritis, autoimmune disease, burns, psoriasis, conjunctivitis, etc. Thus, mice with endotoxemia resulting from injection of Escherichia coli lipopolysaccharide showed a dose-dependent increase in survival in response to i.v. injection of the adenosine kinase inhibitor, 4-amino-1-(5-amino-5-deoxy-1-.beta.-D-ribofuranosyl)-3-bromopyrazolo[3,4-d]pyrimidine-HCl; this effect was antagonized by the adenosine receptor antagonist 8-(p-sulfophenyl)theophylline.

IT **20789-78-0 21950-36-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of adenosine kinase-inhibiting purine nucleoside analogs as antiinflammatory agents)

RN 20789-78-0 HCAPLUS

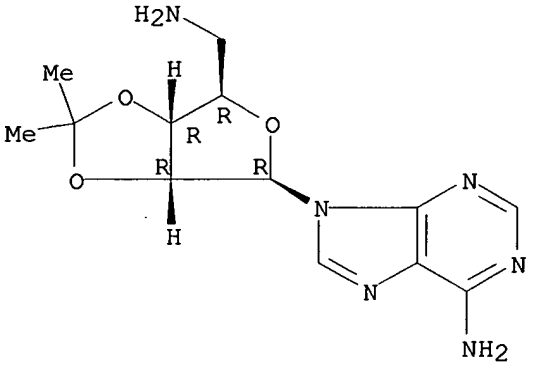
CN Adenosine, 8-bromo-2',3'-O-(1-methylethylidene)-, 5'-(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



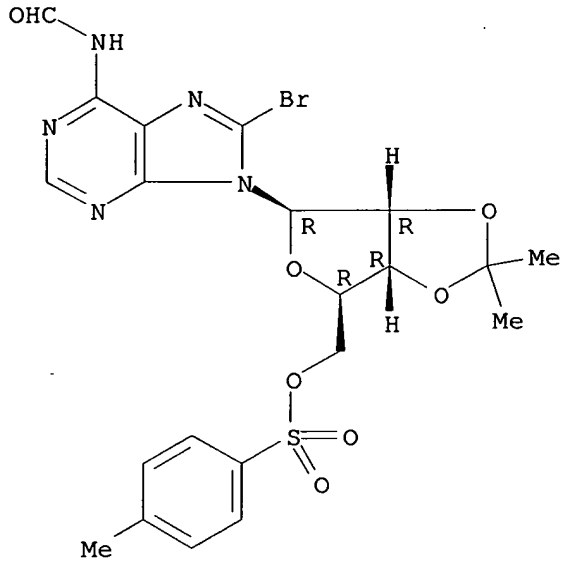
RN 21950-36-7 HCAPLUS
CN Adenosine, 5'-amino-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



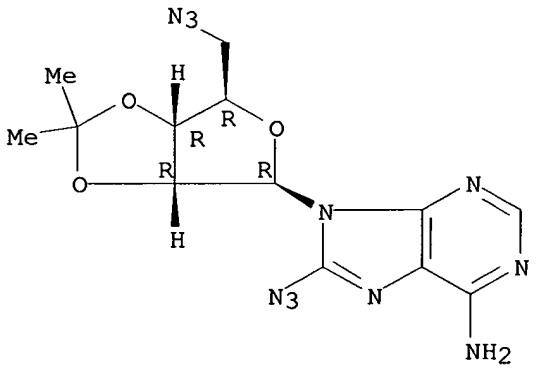
IT **144927-45-7P 158077-68-0P 158077-70-4P**
**158077-71-5P 158077-74-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of adenosine kinase-inhibiting purine nucleoside analogs as antiinflammatory agents)
RN 144927-45-7 HCAPLUS
CN Adenosine, 8-bromo-N-formyl-2',3'-O-(1-methylethylidene)-, 5'-(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



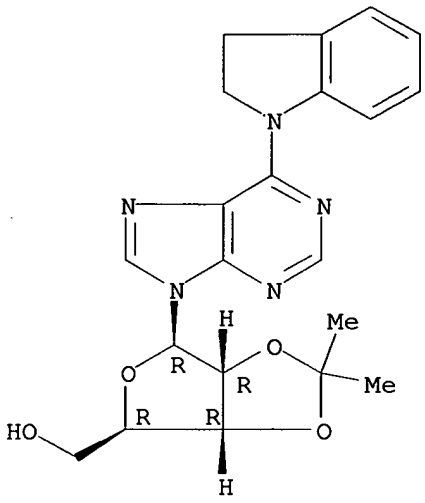
RN 158077-68-0 HCAPLUS
CN Adenosine, 5',8-diazido-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



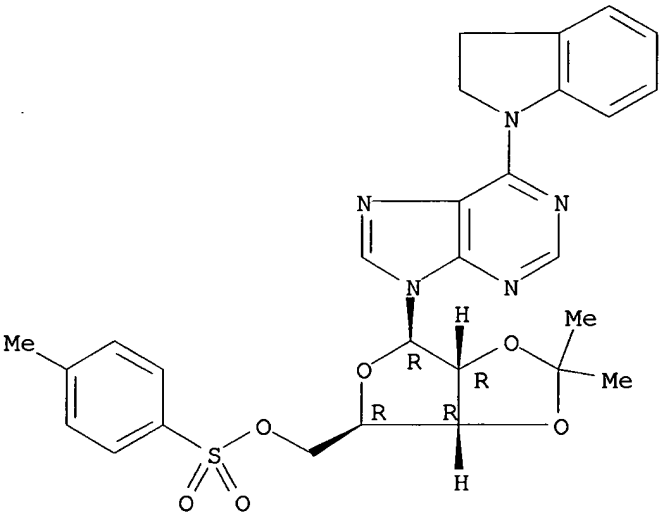
RN 158077-70-4 HCAPLUS
CN 9H-Purine, 6-(2,3-dihydro-1H-indol-1-yl)-9-[2,3-O-(1-methylethylidene)-.beta.-D-ribofuranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



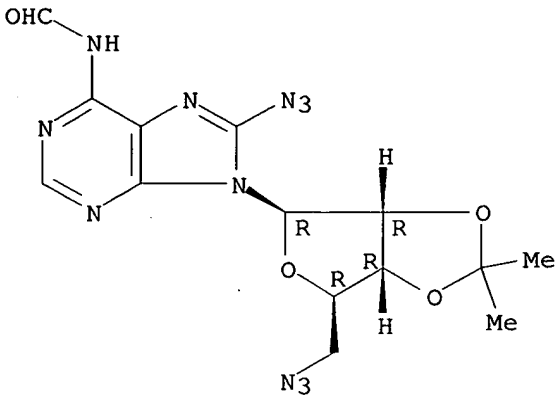
RN 158077-71-5 HCAPLUS
CN 9H-Purine, 6-(2,3-dihydro-1H-indol-1-yl)-9-[2,3-O-(1-methylethylidene)-5-O-[(4-methylphenyl)sulfonyl]-.beta.-D-ribofuranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 158077-74-8 HCAPLUS
CN Adenosine, 5',8-diazido-5'-deoxy-N-formyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

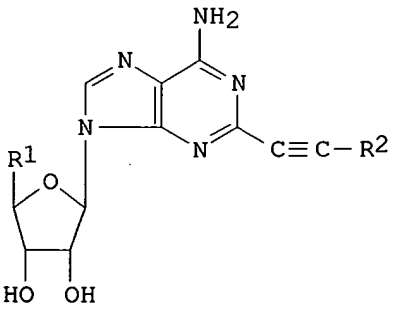
Absolute stereochemistry.



L29 ANSWER 15 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:496074 HCAPLUS
DOCUMENT NUMBER: 119:96074
TITLE: Preparation of adenosine derivatives as cardiovascular agents.
INVENTOR(S): Matsuda, Akira; Azebiru, Toichi; Yamaguchi, Toyofumi; Watanabe, Yoko; Miyashita, Takanori
PATENT ASSIGNEE(S): Yamasa Shoyu Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 05025195 | A2 | 19930202 | JP 1991-202598 | 19910717 |
| JP 3025559 | B2 | 20000327 | | |

PRIORITY APPLN. INFO.: JP 1990-191285 A1 19900719
JP 1990-218690 A1 19900820
OTHER SOURCE(S): MARPAT 119:96074
GI



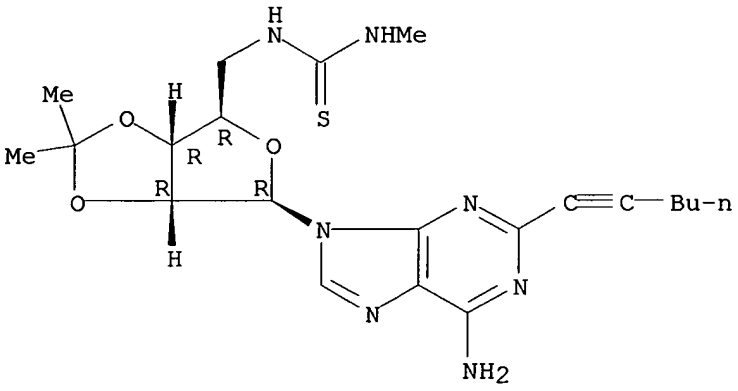
I

AB The title compds. [I; R1 = (un)substituted carbamoyl, CO2H,

alkoxycarbonyl, CH2-N3, (un)substituted aminomethyl, etc.; R2 = (hydroxy)alkyl], useful for treatment of brain **ischemia**, heart **ischemia**, and **hypertension**, are prepd. E.g., 2-iodoadenosine was condensed with acetone, the resulting 2',3'-O-isopropylidene deriv. in MeCN-CHCl3 was oxidized with K periodate in H2O, the product was esterified with MeOH, the resulting Me ester was treated with methanolic NH3, the resulting carboxamide was heated with 1-hexyne in DMF contg. Pd(PPh3)2, CuCl, and Et3N, and the resulting 2-(1-hexynyl)-2',3'-isopropylideneadenosine-4'-carboxamide was deprotected to give 2-(1-hexynyl)-adenosine-4'-carboxamide, which had an ED50 of 0.13 .mu.g/Kg in spontaneously **hypertensive** mice.

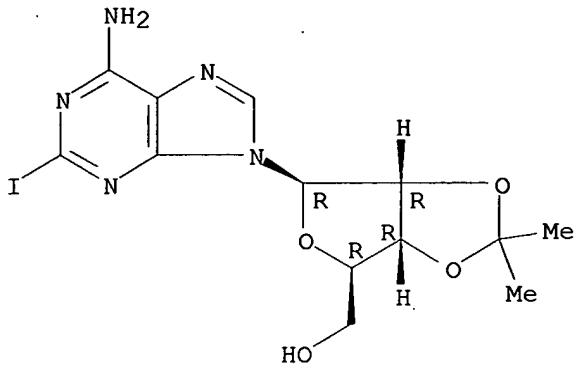
IT **142102-95-2P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as cardiovascular agent)
RN 142102-95-2 HCAPLUS
CN Adenosine, 5'-deoxy-2-(1-hexynyl)-5'-[[(methylamino)thioxomethyl]amino]-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



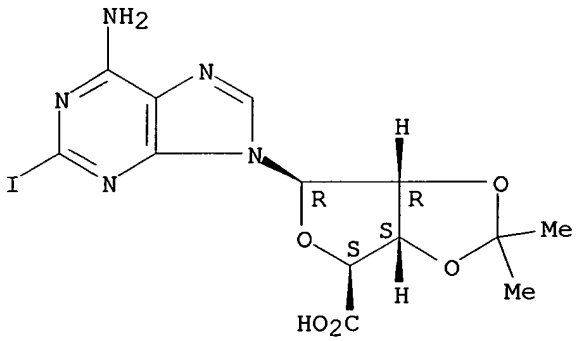

IT **141018-25-9P 141018-26-0P 142102-84-9P**
**142102-85-0P 142102-86-1P 142102-87-2P**
**142102-90-7P 142102-91-8P 142102-92-9P**
**142102-93-0P 142102-94-1P 142103-01-3P**
**142103-03-5P 142103-04-6P 149037-59-2P**
**149037-60-5P 149037-61-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for cardiovascular agents)
RN 141018-25-9 HCAPLUS
CN Adenosine, 2-iodo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



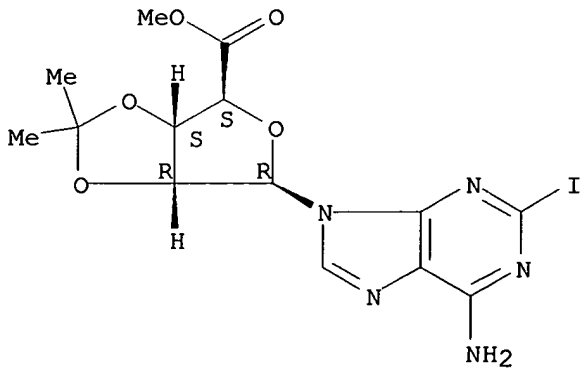
RN 141018-26-0 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 142102-84-9 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

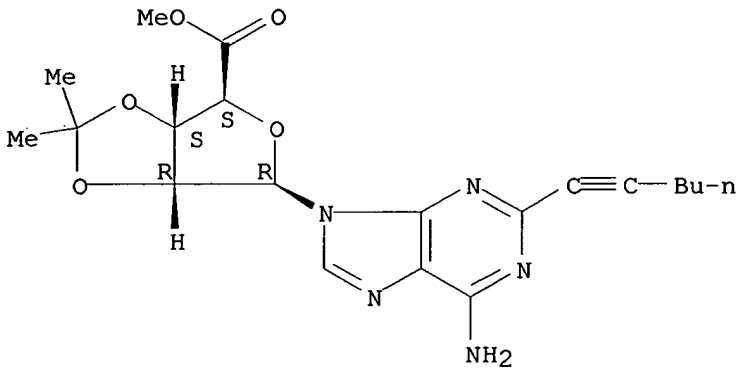
Absolute stereochemistry.



RN 142102-85-0 HCAPLUS

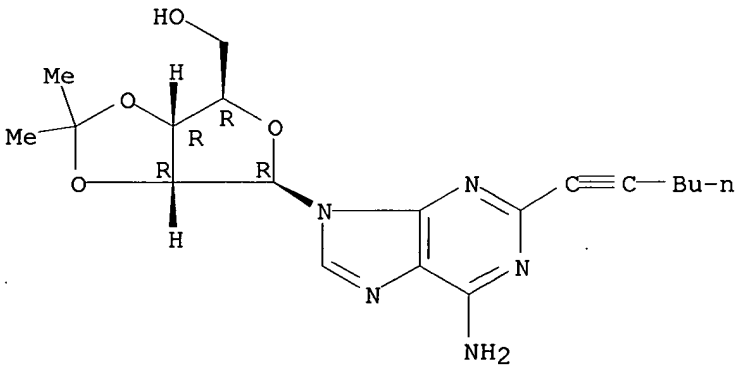
CN .beta.-D-Ribofuranuronic acid, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



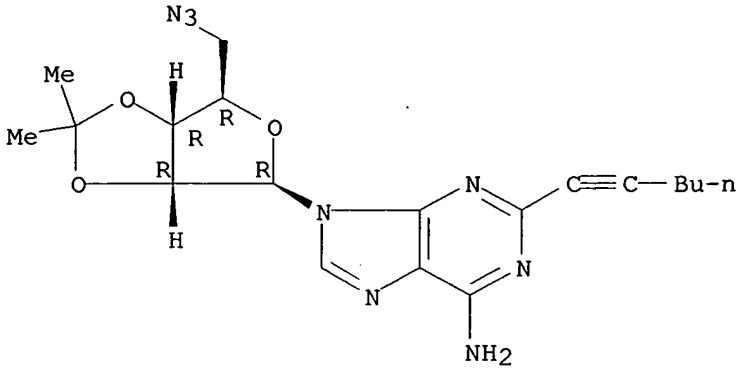

RN 142102-86-1 HCAPLUS
CN Adenosine, 2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



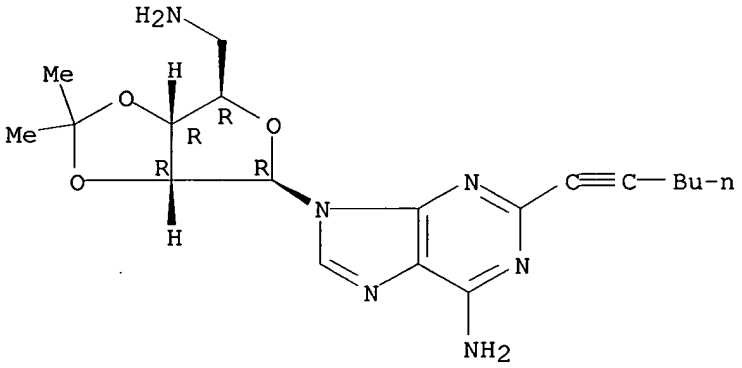

RN 142102-87-2 HCAPLUS
CN Adenosine, 5'-azido-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



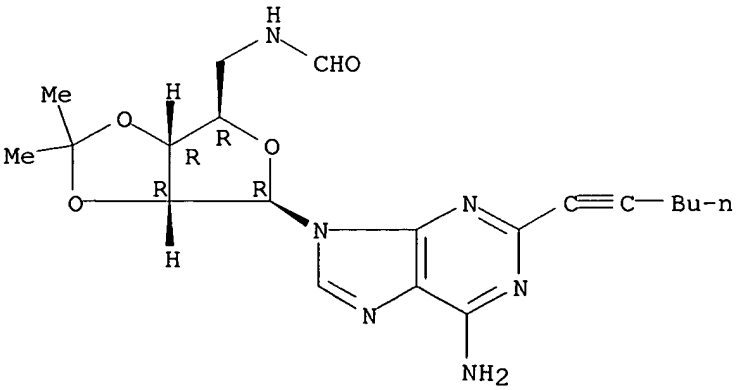
RN 142102-90-7 HCAPLUS
CN Adenosine, 5'-amino-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



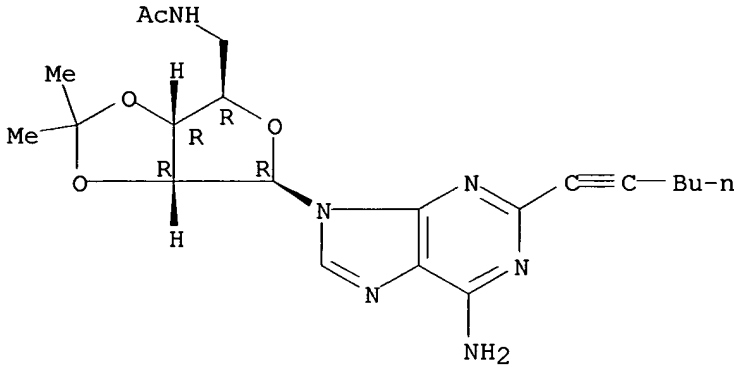
RN 142102-91-8 HCAPLUS
CN Adenosine, 5'-deoxy-5'-(formylamino)-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



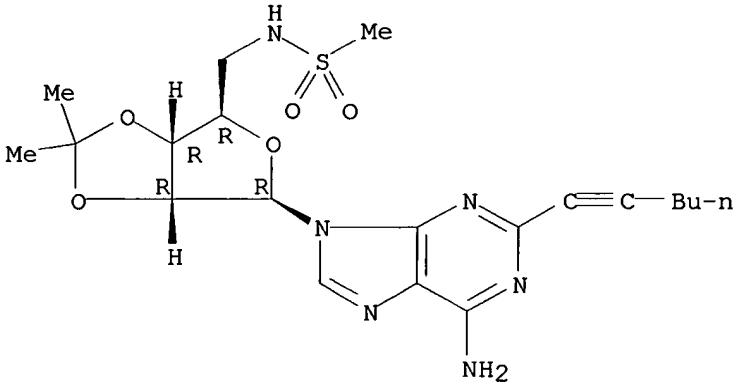
RN 142102-92-9 HCAPLUS
CN Adenosine, 5'-(acetylamino)-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



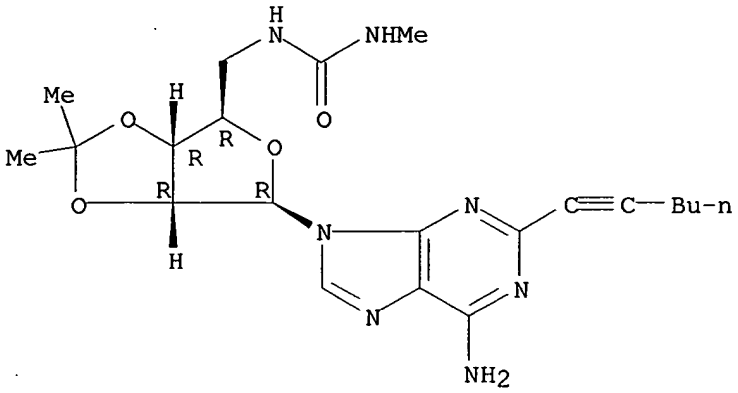

RN 142102-93-0 HCAPLUS
CN Adenosine, 5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)-5'-[(methylsulfonyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



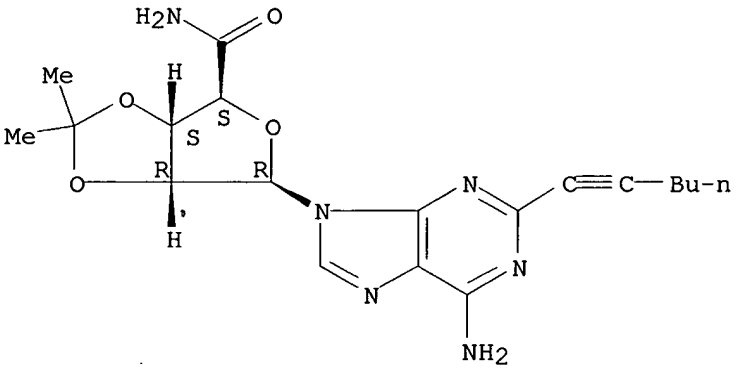

RN 142102-94-1 HCAPLUS
CN Adenosine, 5'-deoxy-2-(1-hexynyl)-5'-[[(methylamino)carbonyl]amino]-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



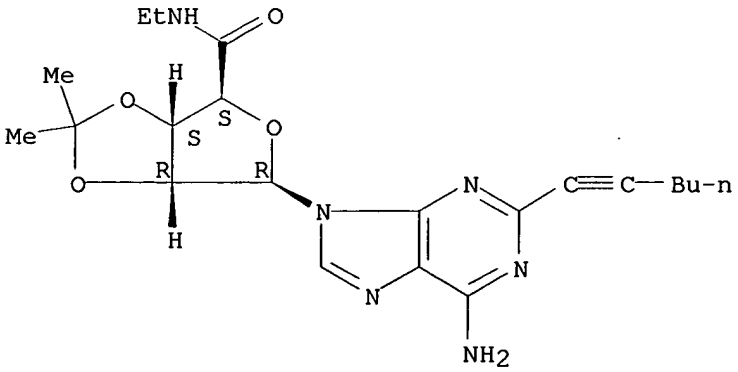
RN 142103-01-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



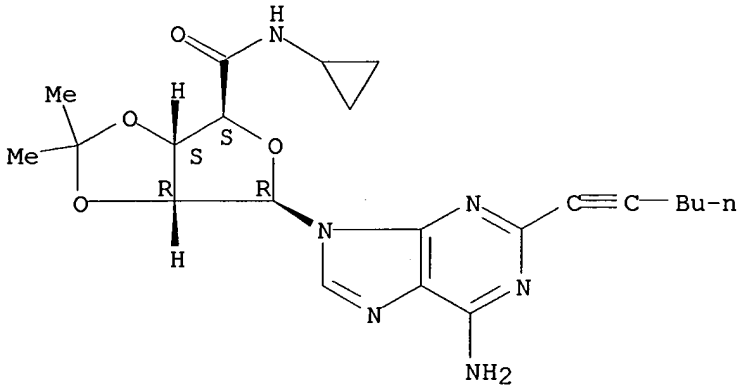
RN 142103-03-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



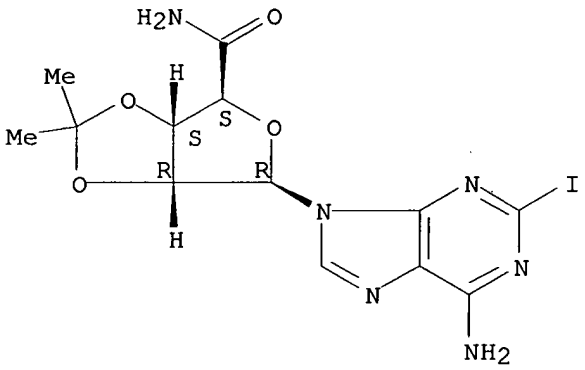
RN 142103-04-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



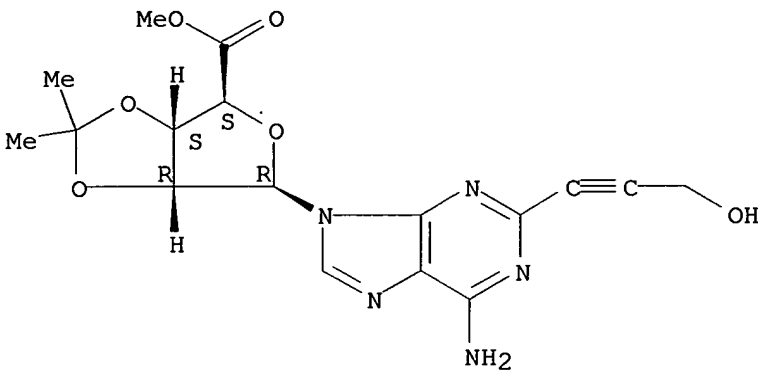

RN 149037-59-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



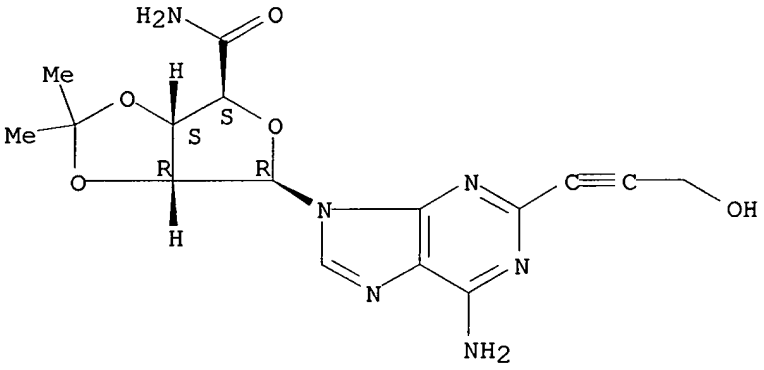

RN 149037-60-5 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-[6-amino-2-(3-hydroxy-1-propynyl)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 149037-61-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(3-hydroxy-1-propynyl)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 16 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:234420 HCAPLUS
DOCUMENT NUMBER: 118:234420
TITLE: Adenosine kinase inhibitors
INVENTOR(S): Browne, Clinton E.; Ugarkar, Bheemarao G.; Mullane, Kevin M.; Gruber, Harry E.; Bullough, David A.; Erion, Mark D.; Castellino, Angelo
PATENT ASSIGNEE(S): Gensia Pharmaceuticals, Inc., USA
SOURCE: Eur. Pat. Appl., 87 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 14
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 496617 | A1 | 19920729 | EP 1992-300580 | 19920123 |
| EP 496617 | B1 | 19991201 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE

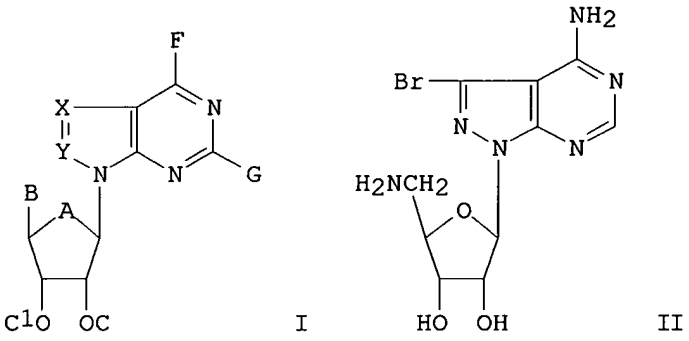
| | | | | |
|---|---|---|---|---|
| CA 2100863 | AA | 19920724 | CA 1992-2100863 | 19920121 |
| WO 9212718 | A1 | 19920806 | WO 1992-US515 | 19920121 |
| W: AU, CA, FI, NO | | | | |
| AU 665184 | B2 | 19951221 | AU 1992-13599 | 19920121 |
| AU 9213599 | A1 | 19920827 | | |
| JP 05112595 | A2 | 19930507 | JP 1992-10094 | 19920123 |
| IL 100742 | A1 | 19960618 | IL 1992-100742 | 19920123 |
| AT 187175 | E | 19991215 | AT 1992-300580 | 19920123 |
| NO 9302628 | A | 19930923 | NO 1993-2628 | 19930721 |
| NO 180418 | B | 19970106 | | |
| NO 180418 | C | 19970416 | | |
| US 5646128 | A | 19970708 | US 1994-349125 | 19941201 |

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| US 1991-647117 | A | 19910123 |
| US 1991-812916 | A | 19911223 |
| US 1989-408707 | B2 | 19890915 |
| US 1990-466979 | B2 | 19900118 |
| WO 1992-US515 | W | 19920121 |
| US 1993-14190 | B2 | 19930203 |
| US 1994-192645 | B1 | 19940203 |

OTHER SOURCE(S): MARPAT 118:234420

GI



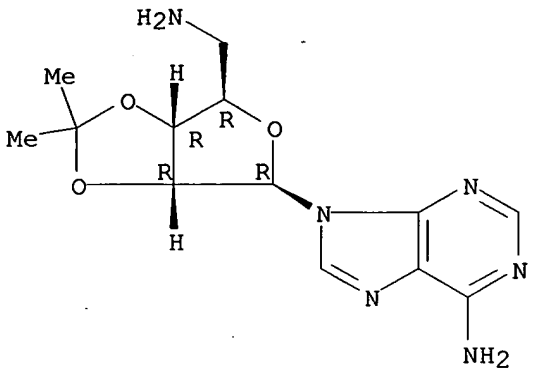

AB Nucleoside analogs I [A = O, CH2, S; B = (un)substituted C1-4 alkyl; C, C1 = H, protective group(s); X = (un)substituted CH; Y = N, (un)substituted CH; F = alkyl, aryl, aralkyl, halogen, (un)substituted NH2, substituted OH or SH, cyano, cyanoalkyl; G = H, halogen, alkyl, alkoxy, alkylamino, alkylthio] were prepd. Thus, the analog II was prepd. from the pyrimidinone via the azide. II has an adenosine kinase-inhibiting ED50 of <10 nM and was effective in improving post-**ischemic** functional recovery in isolated guinea pig heart and in preclin. angina models.

IT **21950-36-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(formylation of)

RN 21950-36-7 HCAPLUS

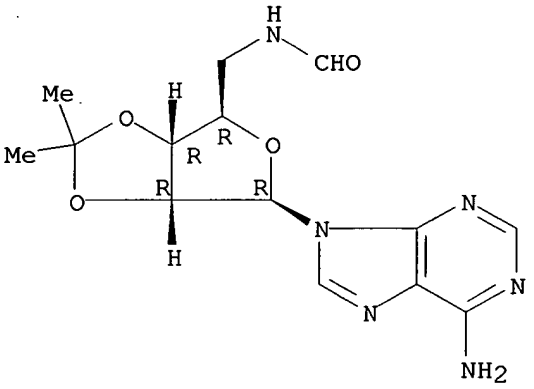
CN Adenosine, 5'-amino-5'-deoxy-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



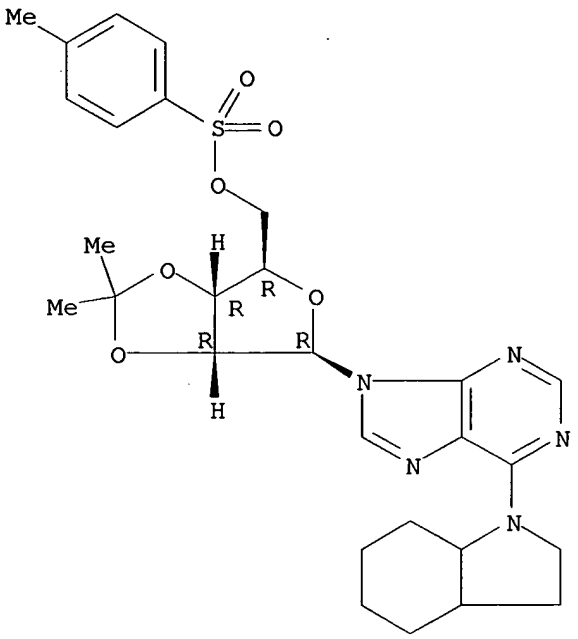
IT **144927-50-4P 144927-52-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)
RN 144927-50-4 HCAPLUS
CN Adenosine, 5'-deoxy-5'-(formylamino)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



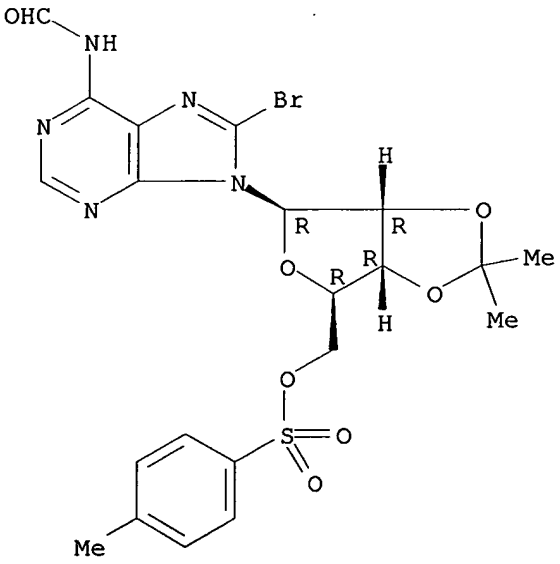
RN 144927-52-6 HCAPLUS
CN 9H-Purine, 9-[2,3-O-(1-methylethylidene)-5-O-[(4-methylphenyl)sulfonyl]-.beta.-D-ribofuranosyl]-6-(octahydro-1H-indol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **144927-45-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, with azide)
RN 144927-45-7 HCAPLUS
CN Adenosine, 8-bromo-N-formyl-2',3'-O-(1-methylethylidene)-, 5'-(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



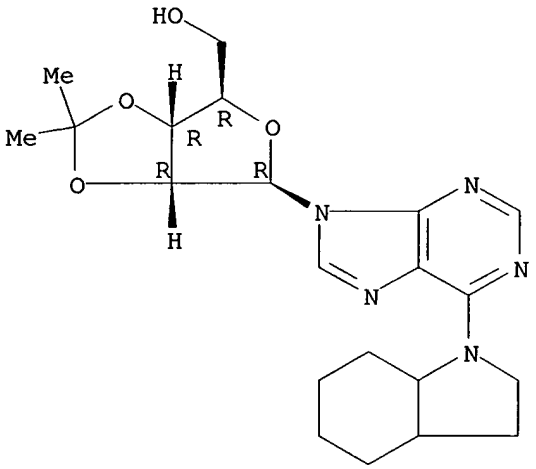
IT **144927-51-5P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and tosylation of)

RN 144927-51-5 HCAPLUS

CN 9H-Purine, 9-[2,3-O-(1-methylethylidene)-.beta.-D-ribofuranosyl]-6-(octahydro-1H-indol-1-yl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L29 ANSWER 17 OF 39 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:470205 HCAPLUS

DOCUMENT NUMBER: 117:70205

TITLE: Nucleosides and nucleotides. 112. 2-(1-Hexyn-1-yl)adenosine-5'-uronamides: a new entry of selective A2 adenosine receptor agonists with potent antihypertensive activity

AUTHOR(S): Homma, Hiroshi; Watanabe, Yohko; Abiru, Toichi; Murayama, Toshihiko; Nomura, Yasuharu; Matsuda, Akira

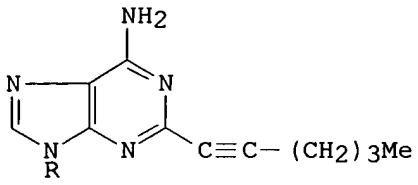
CORPORATE SOURCE: Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan

SOURCE: Journal of Medicinal Chemistry (1992), 35(15), 2881-90
CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

GI

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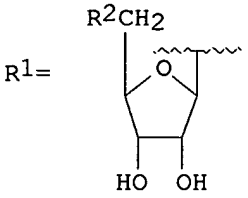
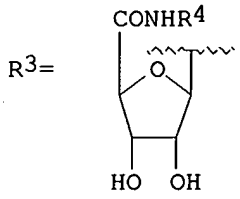


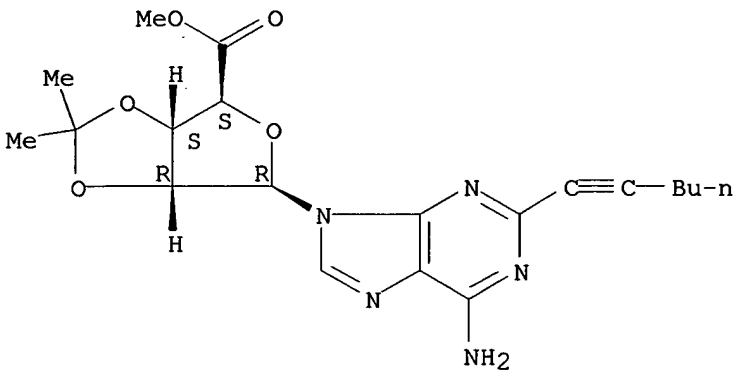

AB Chem. modifications of the potent A2 adenosine receptor agonist 2-(hexynyl)adenosine I (R = R1, R2 = OH) (II) at the 5'-position have been carried out to find more potent and selective A2 agonists. These analogs were evaluated for adenosine A1 and A2 receptor binding affinity in rat brain tissues and antihypertensive effects in spontaneously **hypertensive** rats (SHR). Among the series of compds., I (R = R3, R4 = cyclopropyl) had the most potent affinity to the A2 receptor with a Ki of 2.6 nM, which is essentially the same as that of the parent agonist II. However, the most selective agonist for the A2 receptor was 2-(1-hexyn-1-yl)adenosine-5'-N-methyluronamide I (R = R3, R4 = Me) with a Ki of 11 nM and a 162-fold selectivity. Therefore, the A1/A2 selectivity was consequently increased. Other 5'-deoxy-5'-substituted derivs., e.g. I [R = R1, R2 = Cl (III); R = R3, R4 = H, Me, NHMe), were also prepd. Among these nucleosides, no active compds. with potent or selective affinities to both receptors were found except III. Although glycosyl conformations and sugar-puckering of these nucleosides were studied by 1H NMR spectroscopy, there were no pos. correlations between active and inactive agonists. I (R = R3, R4 = H, cyclopropyl) had a potent hypotensive effect at ED30 values of 0.18 and 0.17 .mu.g/kg, resp., upon i.v. administration to anesthetized SHR.

IT **142102-85-0P 142102-90-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and amidation of)

RN 142102-85-0 HCAPLUS

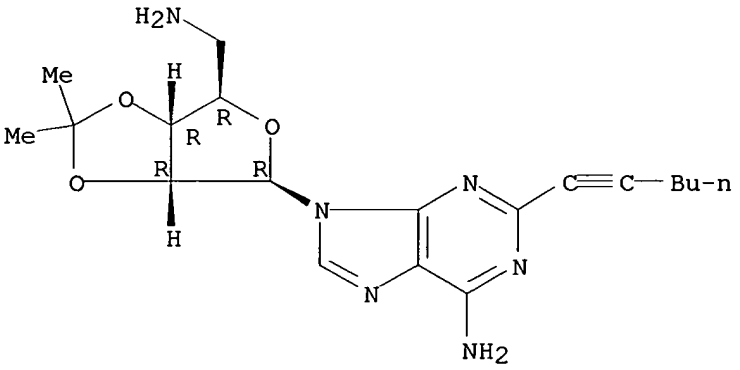
CN .beta.-D-Ribofuranuronic acid, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



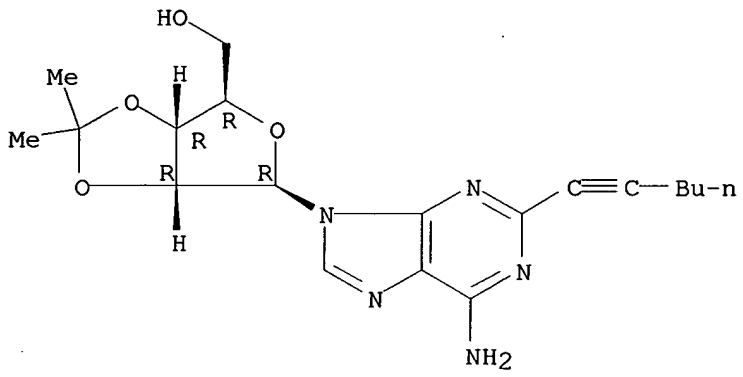
RN 142102-90-7 HCAPLUS
CN Adenosine, 5'-amino-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



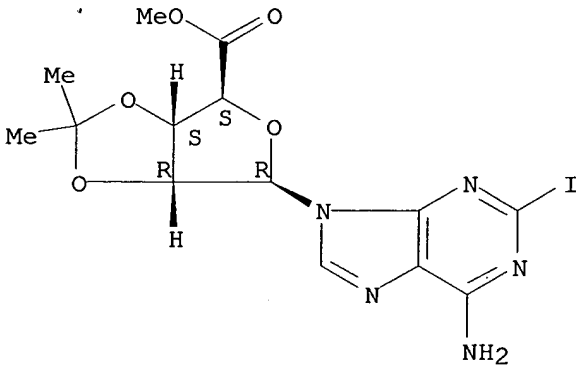
IT **142102-86-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and azidolysis of)
RN 142102-86-1 HCAPLUS
CN Adenosine, 2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



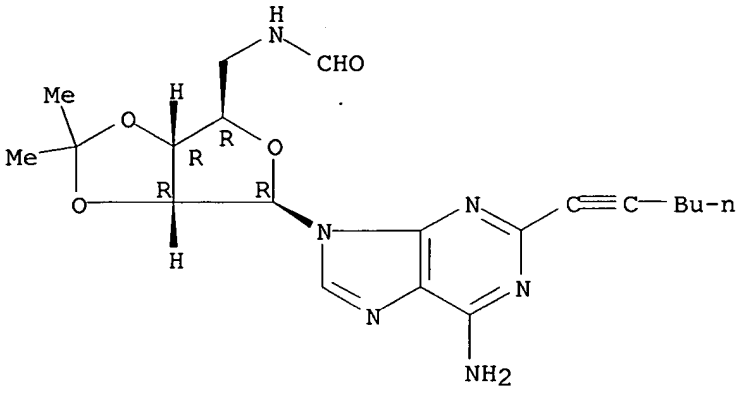
IT **142102-84-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and coupling of, with hexyne)
RN 142102-84-9 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



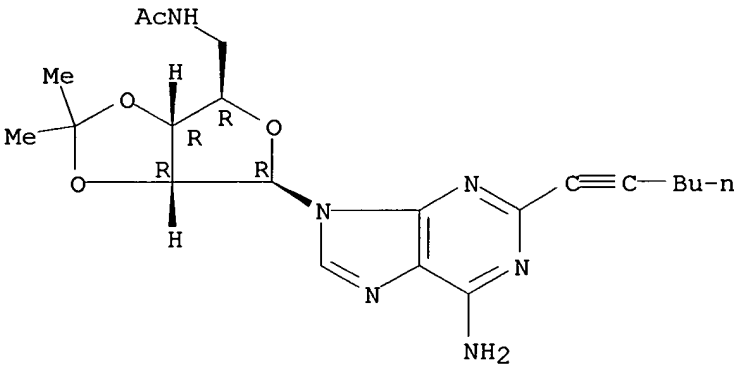
IT **142102-91-8P 142102-92-9P 142102-93-0P**
**142102-94-1P 142102-95-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deblocking of)
RN 142102-91-8 HCAPLUS
CN Adenosine, 5'-deoxy-5'-(formylamino)-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



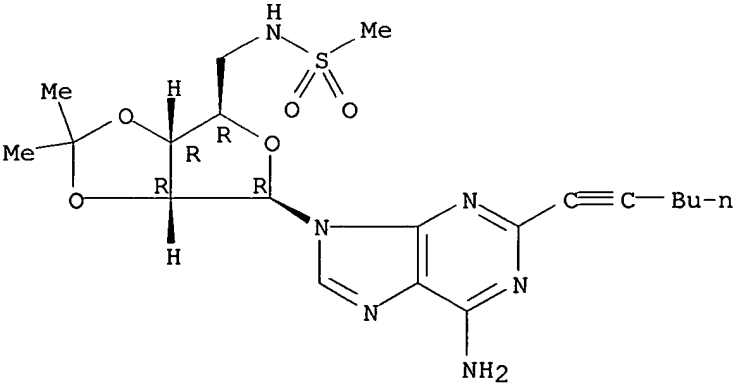
RN 142102-92-9 HCAPLUS
CN Adenosine, 5'-(acetylamino)-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

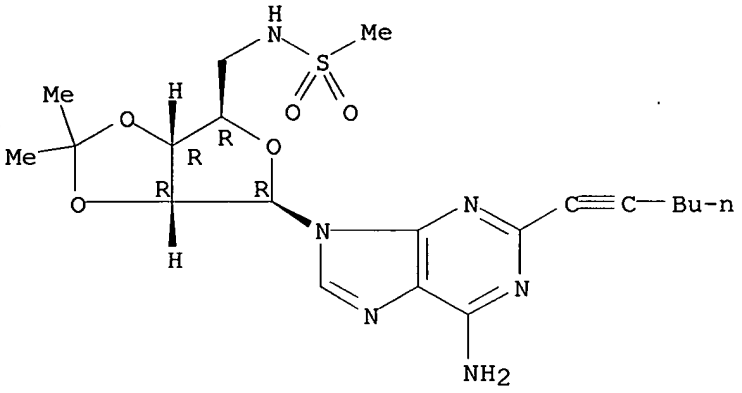
Absolute stereochemistry.



RN 142102-93-0 HCAPLUS
CN Adenosine, 5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)-5'-[(methylsulfonyl)amino]- (9CI) (CA INDEX NAME)

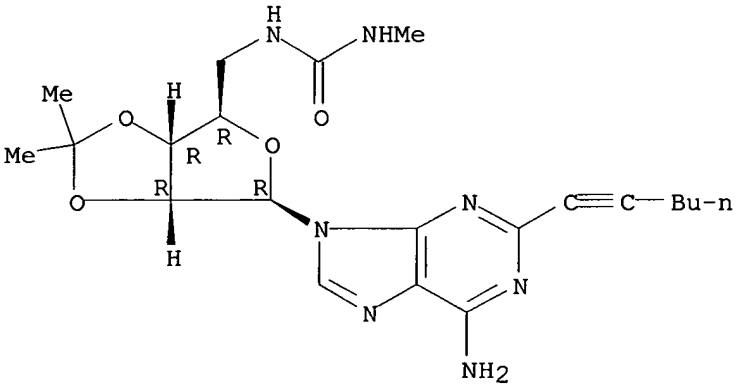
Absolute stereochemistry.





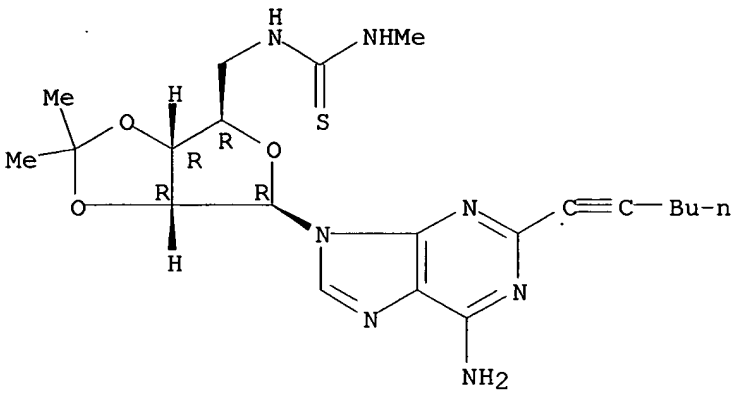
RN 142102-94-1 HCAPLUS
CN Adenosine, 5'-deoxy-2-(1-hexynyl)-5'-[[(methylamino)carbonyl]amino]-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



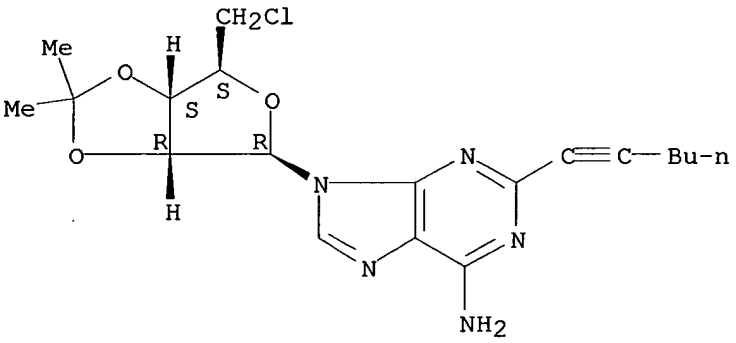
RN 142102-95-2 HCAPLUS
CN Adenosine, 5'-deoxy-2-(1-hexynyl)-5'-[[(methylamino)thioxomethyl]amino]-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



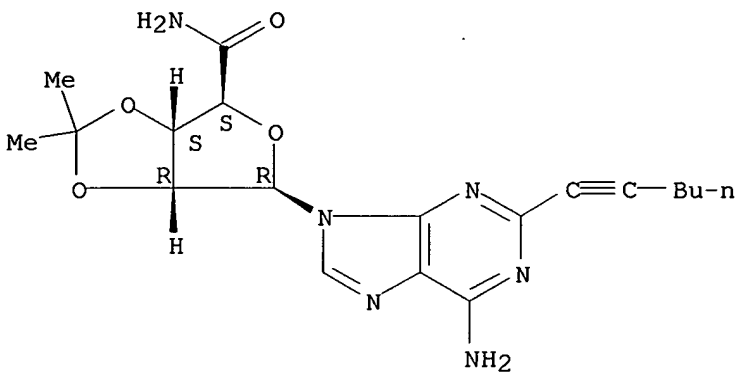
IT **142102-88-3P 142103-01-3P 142103-02-4P**
**142103-03-5P 142103-04-6P 142103-05-7P**
**142103-06-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)
RN 142102-88-3 HCAPLUS
CN Adenosine, 5'-chloro-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



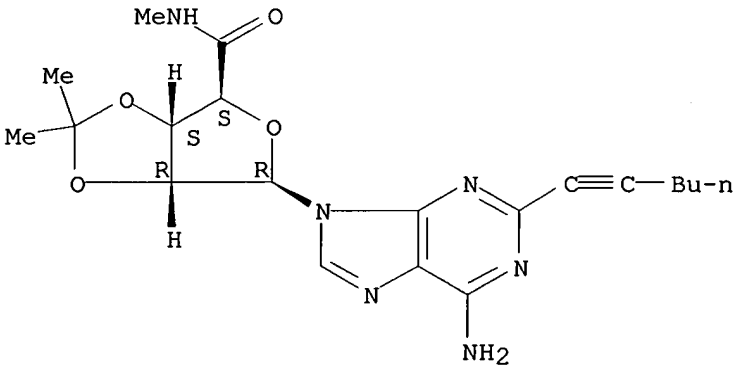
RN 142103-01-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-
deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



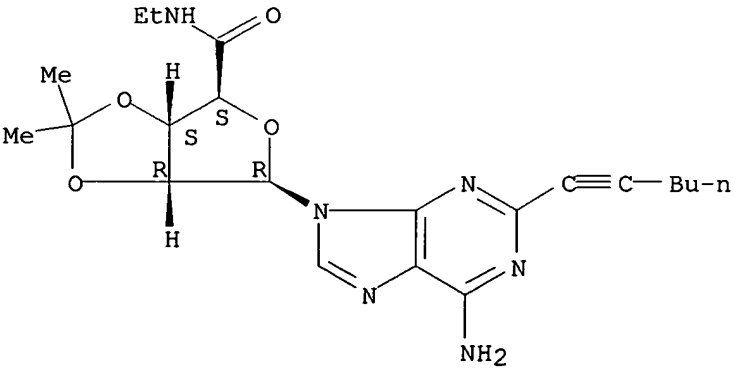
RN 142103-02-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



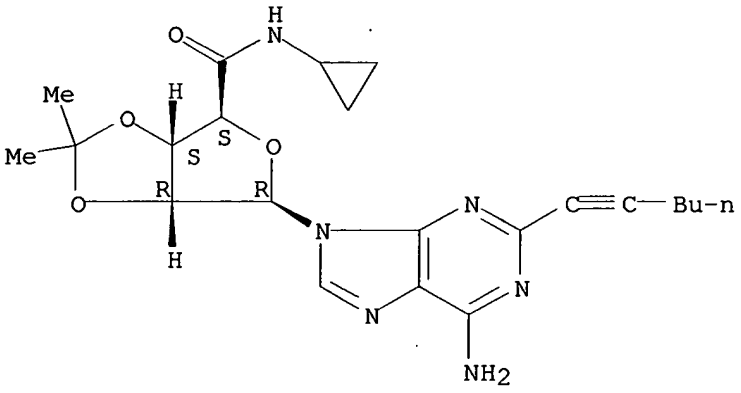
RN 142103-03-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



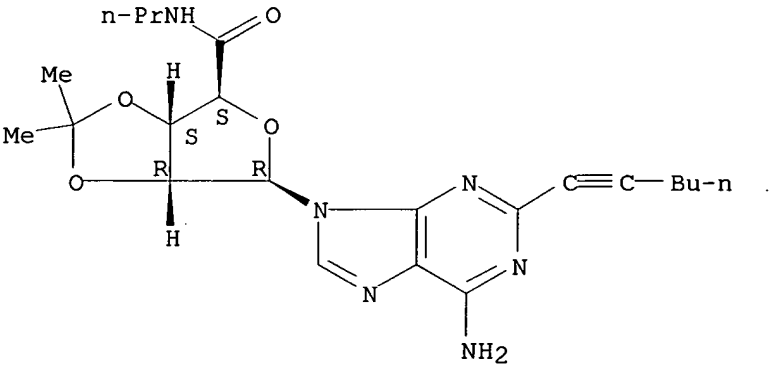
RN 142103-04-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



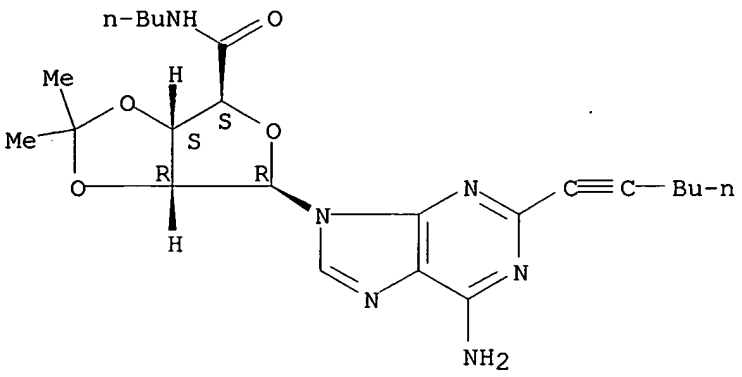
RN 142103-05-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-N-propyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



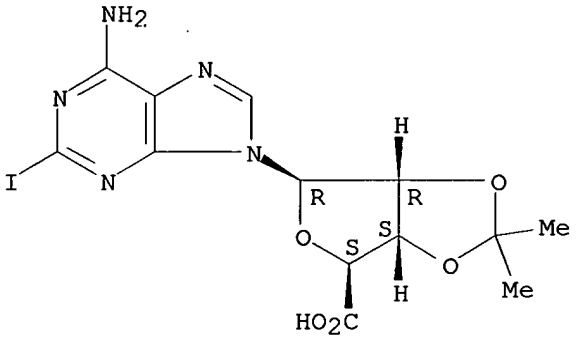
RN 142103-06-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-(1-hexynyl)-9H-purin-9-yl]-N-butyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



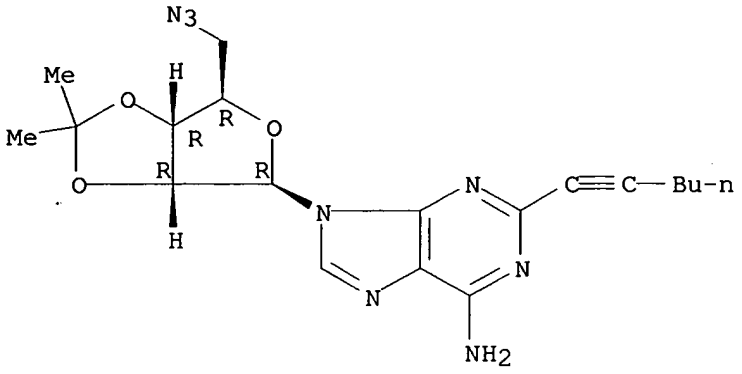

IT **141018-26-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and esterification of)
RN 141018-26-0 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-iodo-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



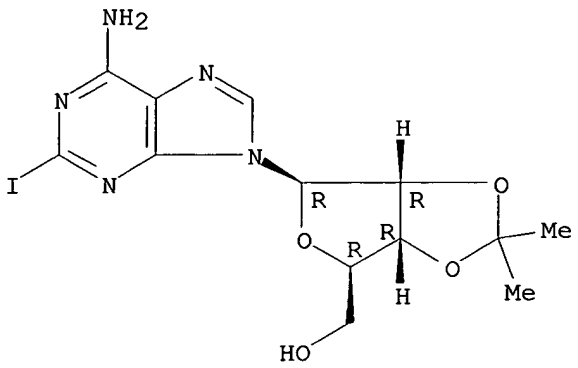

IT **142102-87-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., chlorination, and redn. of)
RN 142102-87-2 HCAPLUS
CN Adenosine, 5'-azido-5'-deoxy-2-(1-hexynyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **141018-25-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., oxidn., and coupling of, with hexyne)
RN 141018-25-9 HCAPLUS
CN Adenosine, 2-iodo-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



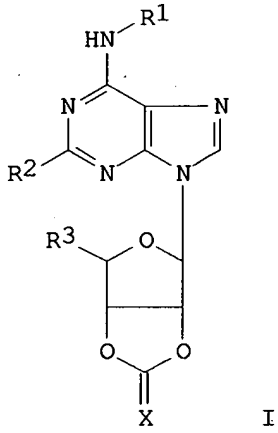
L29 ANSWER 18 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:236101 HCAPLUS
DOCUMENT NUMBER: 116:236101
TITLE: Preparation of new adenosine derivatives as cardiovascular agents.
INVENTOR(S): Gadient, Fulvio
PATENT ASSIGNEE(S): Sandoz-Patent-G.m.b.H., Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 4025879 | A1 | 19920220 | DE 1990-4025879 | 19900816 |

| | | | | | |
|---|---|---|---|---|---|
| CA 2064869 | AA | 19920217 | CA 1991-2064869 | | 19910813 |
| WO 9203463 | A1 | 19920305 | WO 1991-CH170 | | 19910813 |
| W: AU, CA, CS, FI, HU, JP, KR, PL, SU, US | | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE | | | | | |
| AU 9183032 | A1 | 19920317 | AU 1991-83032 | | 19910813 |
| AU 638600 | B2 | 19930701 | | | |
| EP 496852 | A1 | 19920805 | EP 1991-913964 | | 19910813 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | | |
| HU 60504 | A2 | 19920928 | HU 1992-1080 | | 19910813 |
| JP 05502889 | T2 | 19930520 | JP 1991-513113 | | 19910813 |
| ZA 9109267 | A | 19930524 | ZA 1991-9267 | | 19911212 |
| RO 110236 | B1 | 19951130 | RO 1992-152 | | 19920213 |
| PRIORITY APPLN. INFO.: | | | DE 1990-4025879 | A | 19900816 |
| | | | WO 1991-CH170 | A | 19910813 |

OTHER SOURCE(S): MARPAT 116:236101

GI



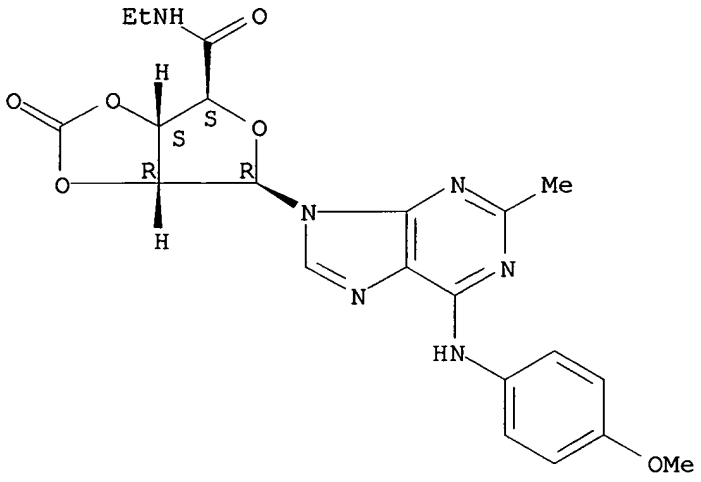
I

AB The title compds. [I; R1 = H, alkyl, cycloalkyl, Ph, (substituted) phenylalkyl; R2 = H, alkyl, halo, cycloalkyl; R3 = CH2OH, CONHR4; R4 = H, alkyl, cycloalkyl; X = O, S], useful for the treatment of **hypertension**, thrombolism, supraventricular tachycardia, etc. (no data), were prepd. Cyclocondensation of 1'-deoxy-1'-(6-p-methoxyanilino-2-methyl-9-purinyl)-.beta.-D-ribofuranuronic acid N-ethylamide with 1,1'-carbonyldi-1H-imidazole in DMF at room temp. for 5 h gave I [R1 = p-MeOC6H4, R2 = Me, R3 = EtNHCO, X = O].

IT **141426-21-3P 141426-22-4P 141426-23-5P**
**141426-24-6P 141426-25-7P 141426-26-8P**
**141426-27-9P 141426-28-0P 141426-29-1P**
**141426-30-4P 141426-31-5P 141426-32-6P**
**141426-33-7P 141426-34-8P 141426-35-9P**
**141426-36-0P 141426-37-1P 141426-38-2P**
**141426-39-3P 141426-40-6P 141426-41-7P**
**141426-42-8P 141426-43-9P 141448-37-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

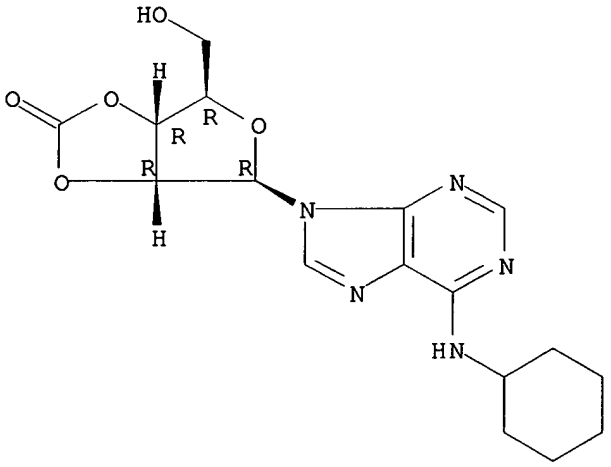
(prepn. of, as cardiovascular agent)
RN 141426-21-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-methoxyphenyl)amino]-2-methyl-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



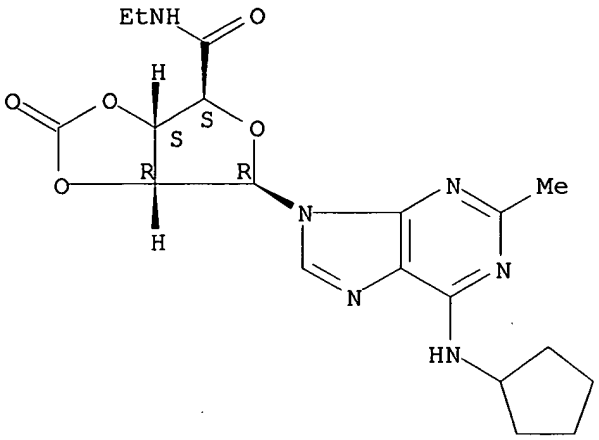

RN 141426-22-4 HCAPLUS
CN Adenosine, N-cyclohexyl-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



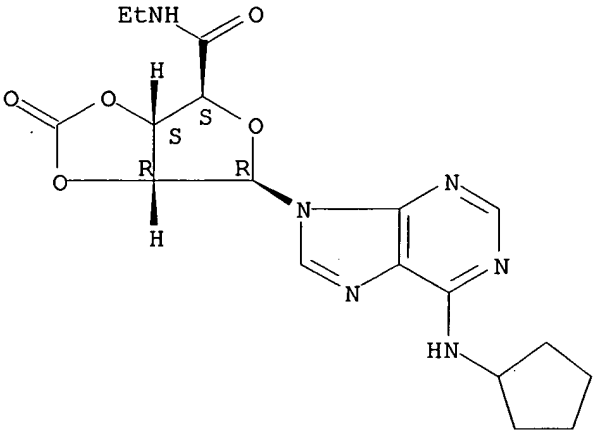

RN 141426-23-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-(cyclopentylamino)-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



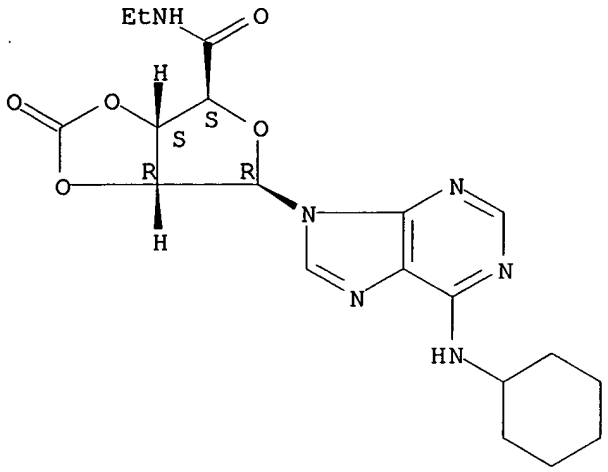
RN 141426-24-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-(cyclopentylamino)-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



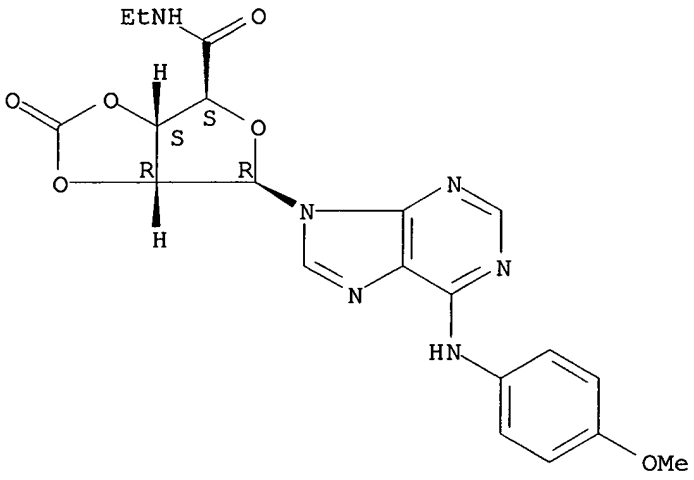
RN 141426-25-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-(cyclohexylamino)-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



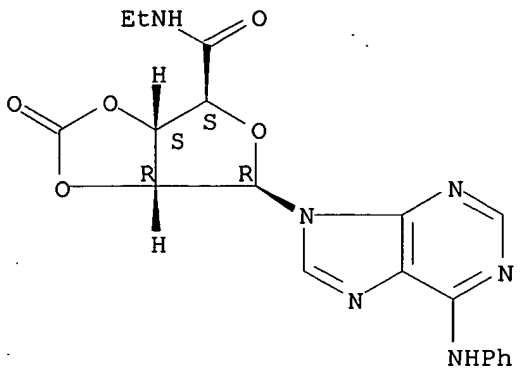
RN 141426-26-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-methoxyphenyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



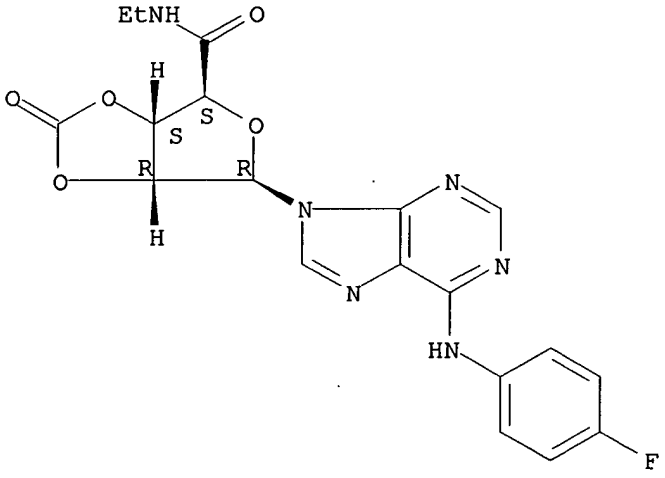
RN 141426-27-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-(phenylamino)-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



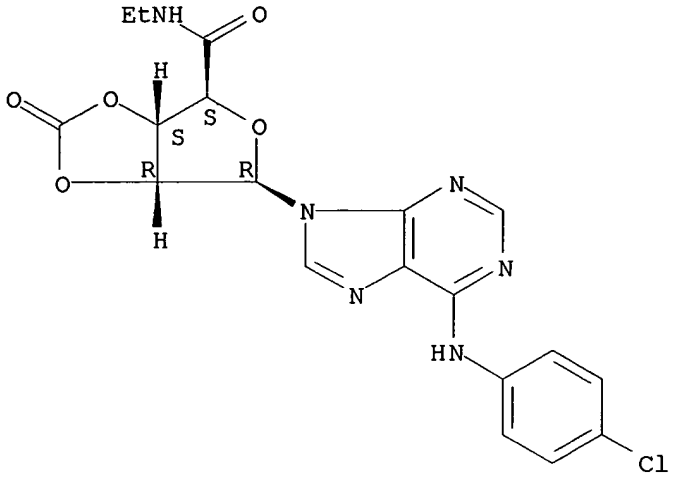

RN 141426-28-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-fluorophenyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



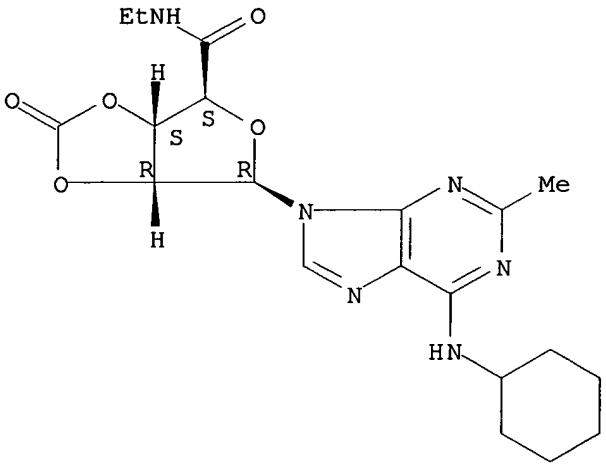

RN 141426-29-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(4-chlorophenyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



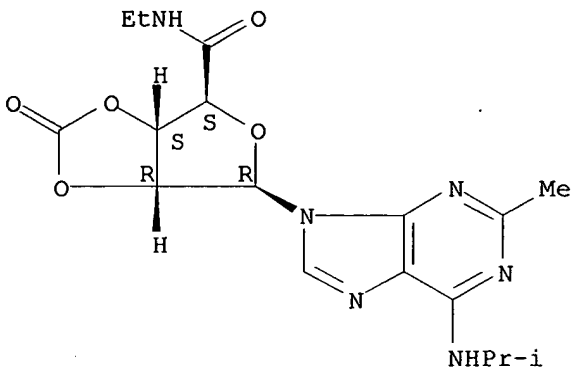
RN 141426-30-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-(cyclohexylamino)-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



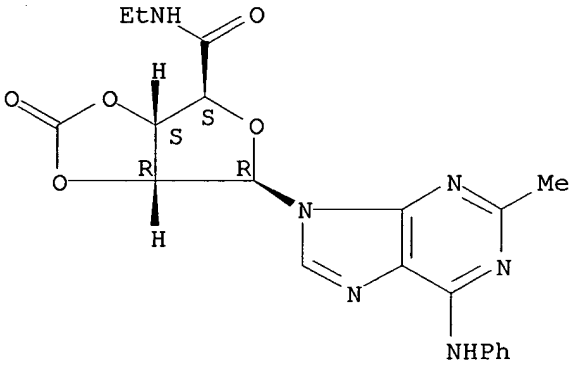
RN 141426-31-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[2-methyl-6-[(1-methylethyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



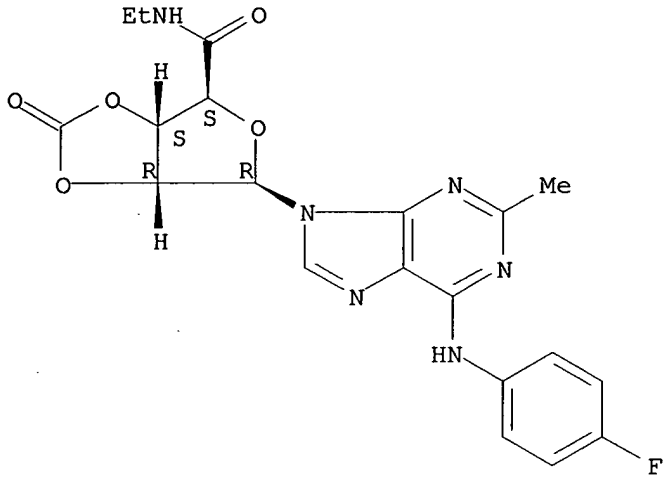

RN 141426-32-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[2-methyl-6-(phenylamino)-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



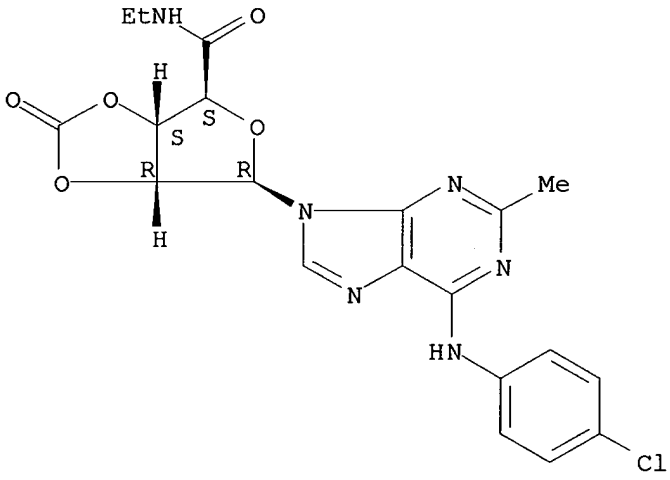

RN 141426-33-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-fluorophenyl)amino]-2-methyl-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



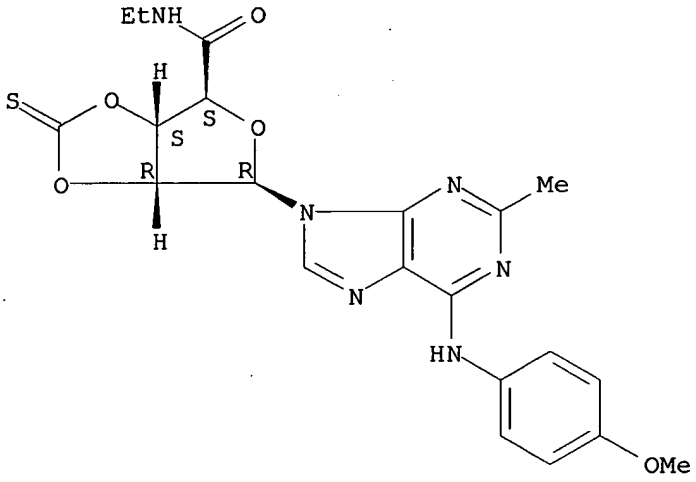

RN 141426-34-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(4-chlorophenyl)amino]-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



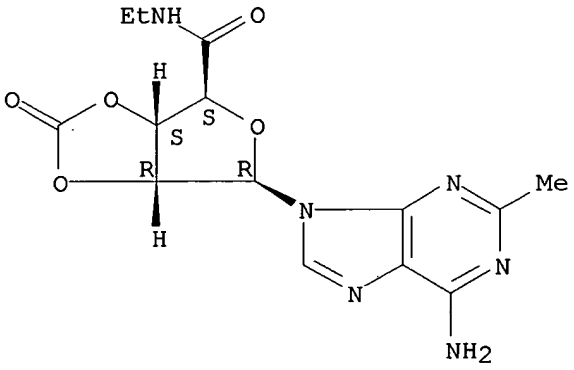

RN 141426-35-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-methoxyphenyl)amino]-2-methyl-9H-purin-9-yl]-, cyclic 2,3-carbonothioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



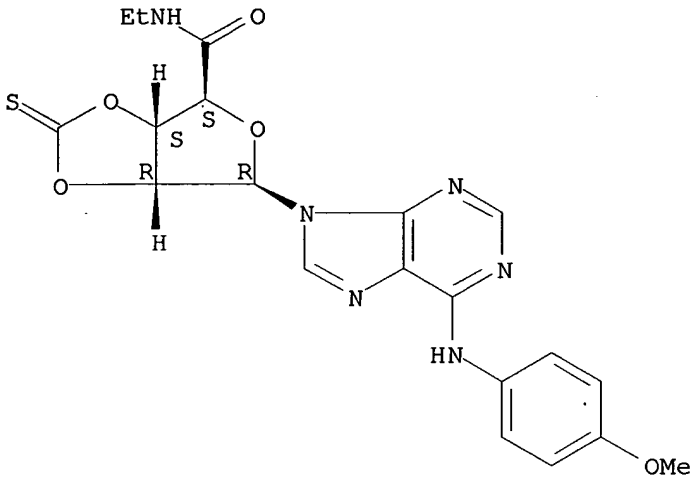

RN 141426-36-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-methyl-9H-purin-9-yl)-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



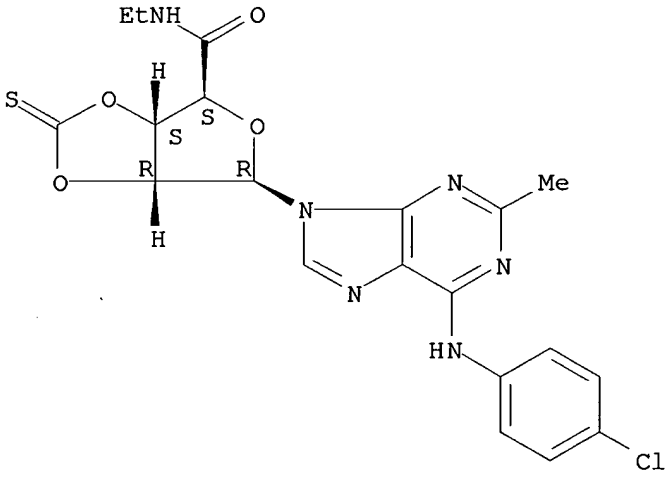

RN 141426-37-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-methoxyphenyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonothioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



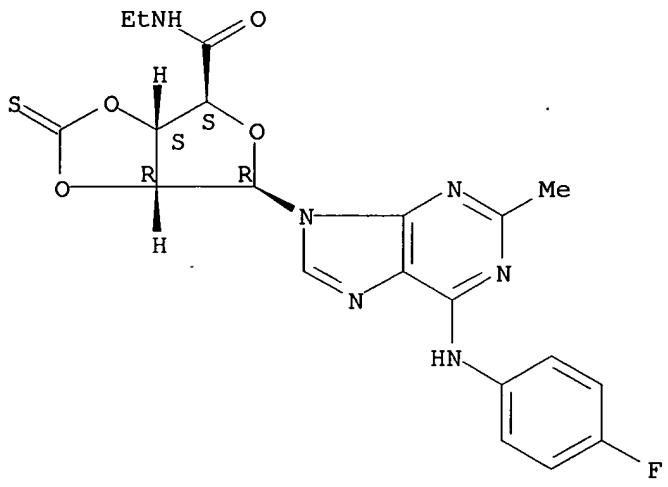
RN 141426-38-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-[(4-chlorophenyl)amino]-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonothioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



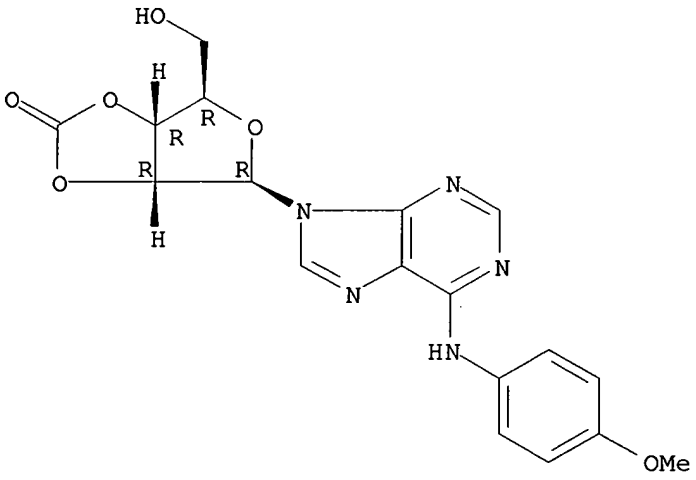
RN 141426-39-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-fluorophenyl)amino]-2-methyl-9H-purin-9-yl]-, cyclic 2,3-carbonothioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



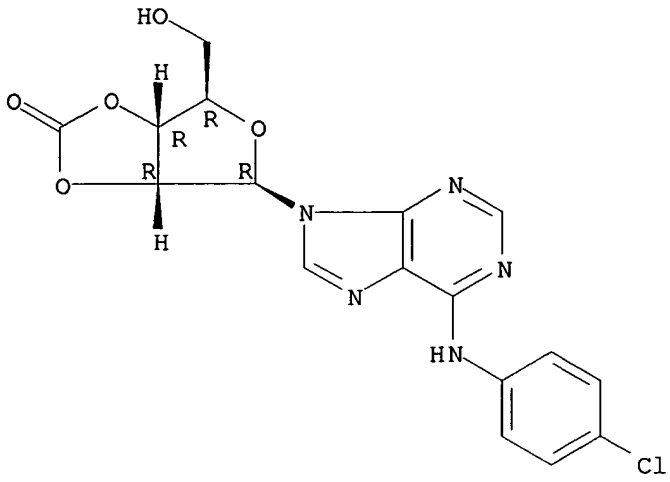

RN 141426-40-6 HCAPLUS
CN Adenosine, N-(4-methoxyphenyl)-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



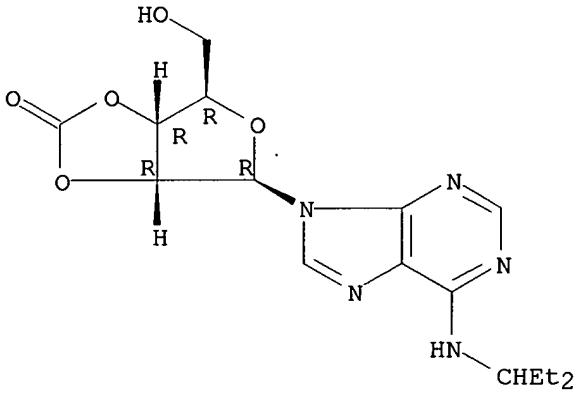

RN 141426-41-7 HCAPLUS
CN Adenosine, N-(4-chlorophenyl)-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



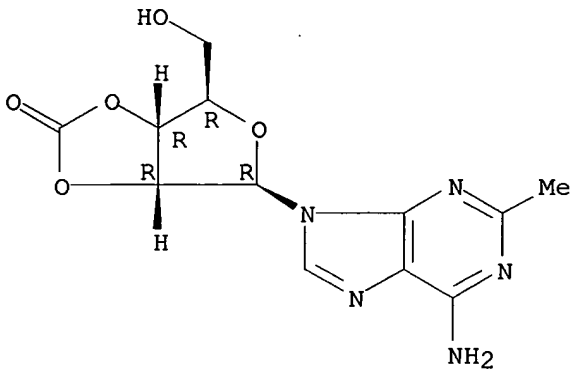
RN 141426-42-8 HCAPLUS
CN Adenosine, N-(1-ethylpropyl)-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



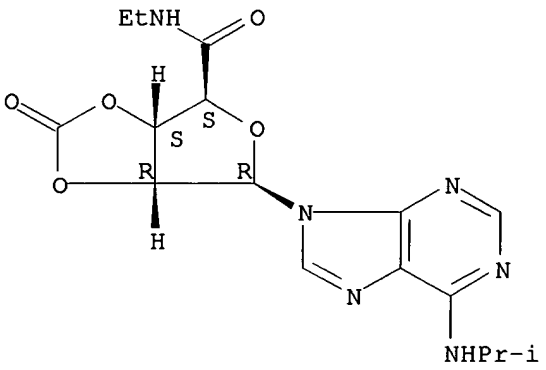
RN 141426-43-9 HCAPLUS
CN Adenosine, 2-methyl-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

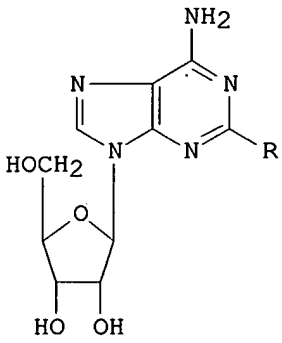


RN 141448-37-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(1-methylethyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

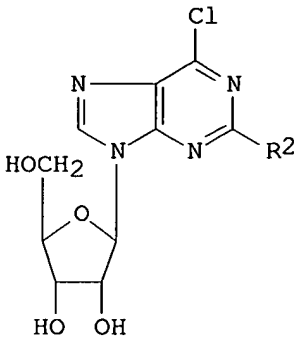
Absolute stereochemistry.



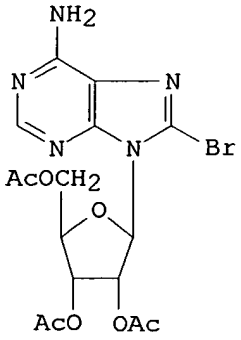
L29 ANSWER 19 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:59857 HCAPLUS
DOCUMENT NUMBER: 116:59857
TITLE: Nucleosides and nucleotides. 103. 2-Alkynyladenosines: a novel class of selective adenosine A2 receptor agonists with potent antihypertensive effects
AUTHOR(S): Matsuda, Akira; Shinozaki, Misao; Yamaguchi, Toyofumi; Homma, Hiroshi; Nomoto, Rie; Miyasaka, Tadashi; Watanabe, Yohko; Abiru, Toichi
CORPORATE SOURCE: Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan
SOURCE: Journal of Medicinal Chemistry (1992), 35(2), 241-52
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 116:59857
GI




I




II



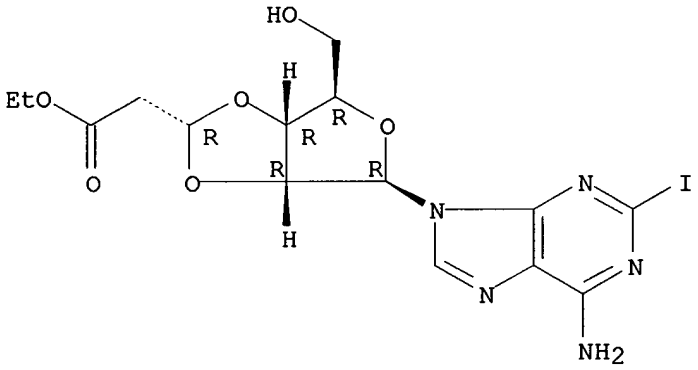

III

AB The synthesis and receptor-binding activities at A1 and A2 adenosine receptors for a series of 2-alkynyladenosines, are described. The Pd-catalyzed cross-coupling reaction of 2-iodoadenosine (I; R = iodo) with various terminal alkynes in the presence of bis(triphenylphosphine)palladium dichloride and CuI in DMF contg. NEt3 gives 2-alkynyladenosines I [R = C.tplbond.CR2,R2 = Et, Pr, Bu, pentyl, hexyl, heptyl, octyl, decyl, dodecyl, tetradecyl, hexadecyl, CH2OH, CH2CH2OH, CH2OMe, CH2O(CH2)3Me]. An economical synthetic method for the prepn. of 9-(2,3,5-tri-O-acetyl-1-.beta.-D-ribofuranosyl)-6-chloro-2-iodopurine (II; R2 = iodo), which is a precursor of I (R = iodo) is also included. Several transformation reactions of 2-(1-octyn-1-yl)adenosine I [R = C.tplbond.C (CH2-Me] and 2-(1-ethyn-1-yl)adenosine I (R = C.tplbond.CH) and a similar cross-coupling reaction of 6-chloropurine deriv. II (R2 = H) and 8-bromoadenosine III with 1-octyne are also reported. Many of these 2-alkynyladenosines tested for A1 and A2 adenosine receptor binding activities in rat brain are selective for the A2 adenosine receptor. Among them, 2-(1-hexyn-1-yl)adenosine has the highest affinity for both A1 and A2 receptors with Ki values of 126.5 and 2.8 nM, resp. The structure-activity relationship of this series of compds. including 6- or 8-alkynylpurine nucleosides and 2-alkyl- and 2-alkenyladenosines is discussed in terms of potency at both receptor subtypes. Addnl., how hypotensive activity and heart rate decrease brought on by I (R = C.tplbond.CR3) and some other compds. with spontaneously **hypertensive** rats are proportional to the order of the potency to both A1 and A2 binding affinities, are described. Thus, 2-alkynyladenosines are interesting and promising as antihypertensive agents that should be considered for further detailed preclin. evaluation.

IT **137915-39-0P 137915-40-3P**

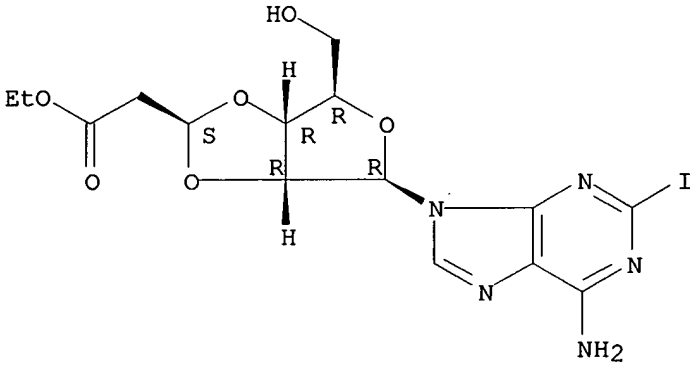
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 137915-39-0 HCAPLUS
CN Adenosine, 2',3'-O-(3-ethoxy-3-oxopropylidene)-2-iodo-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 137915-40-3 HCAPLUS
CN Adenosine, 2',3'-O-(3-ethoxy-3-oxopropylidene)-2-iodo-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



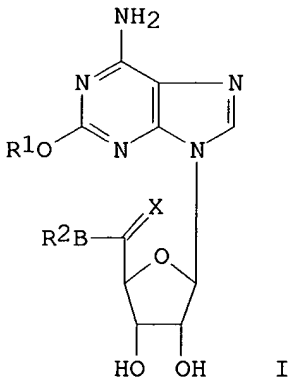
L29 ANSWER 20 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:6922 HCAPLUS
DOCUMENT NUMBER: 116:6922
TITLE: Preparation of 2-aralkoxy- and 2-alkoxyadenosine derivatives as coronary **vasodilators** and antihypertensive agents
INVENTOR(S): Olsson, Ray A.; Thompson, Robert D.
PATENT ASSIGNEE(S): Whitby Research, Inc., USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9113082 | A1 | 19910905 | WO 1991-US1023 | 19910214 |
| W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU | | | | |
| RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG | | | | |
| US 5140015 | A | 19920818 | US 1990-482282 | 19900220 |
| AU 9173255 | A1 | 19910918 | AU 1991-73255 | 19910214 |
| AU 645784 | B2 | 19940127 | | |
| EP 515514 | A1 | 19921202 | EP 1991-904813 | 19910214 |
| EP 515514 | B1 | 20000830 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| JP 05506436 | T2 | 19930922 | JP 1991-505571 | 19910214 |
| JP 3160611 | B2 | 20010425 | | |
| AT 195946 | E | 20000915 | AT 1991-904813 | 19910214 |
| ES 2150903 | T3 | 20001216 | ES 1991-904813 | 19910214 |
| CA 2074853 | AA | 19940130 | CA 1992-2074853 | 19920729 |
| US 36494 | E | 20000111 | US 1993-98180 | 19930726 |

PRIORITY APPLN. INFO.: US 1990-482282 A 19900220
WO 1991-US1023 A 19910214

OTHER SOURCE(S): MARPAT 116:6922
GI




I

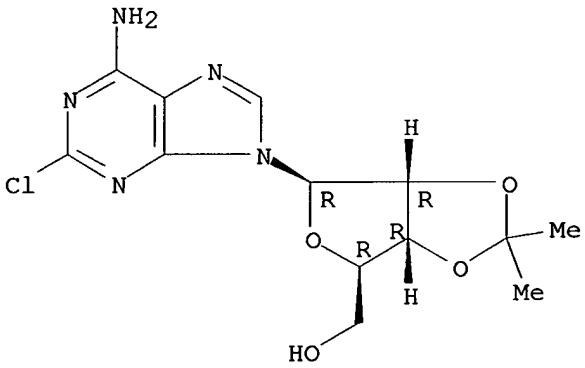
AB Title compds. I [R1 = (substituted) C1-6 hydrocarbyl, cyclic hydrocarbyl, (substituted) Ph, (substituted) thienyl, (substituted) naphthyl, (substituted) indolyl, etc.; R2 = (hydroxy) C1-4 hydrocarbyl; X = 2H or O; B = O, N; with provisos] were prepd. as adenosine A2 receptor agonists useful as coronary **vasodilators** and antihypertensives. Thus, n-BuLi in hexanes was added to a soln. of 4-FlC6H4(CH2)2OH in THF at 10.degree.. The soln. was stirred 15 min at room temp., then 2-chloro-2',3'-O-(ethoxymethylidene)adenosine was added and the mixt. was refluxed 4 days. The resulting product was deprotected by HOAc hydrolysis to give 2-[2-(4-fluorophenyl)ethoxy]adenosine (II). II at 0.9 nM gave a half-maximal increase in coronary blood flow in guinea pigs vs. 49.7 nM

for adenosine.

IT **24639-06-3 56720-43-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkoxylation of, in prepn. of adenosine A2 receptor agonists)

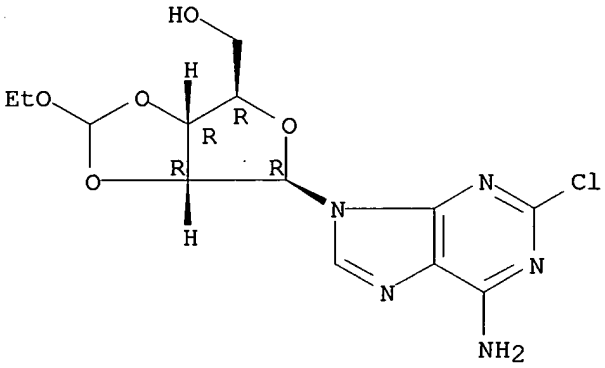
RN 24639-06-3 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

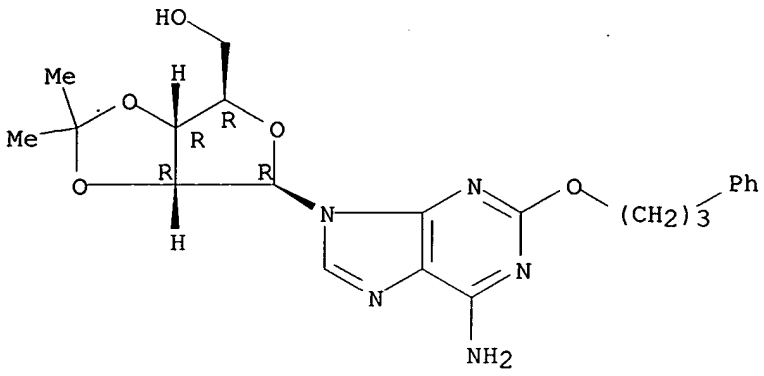
Absolute stereochemistry.



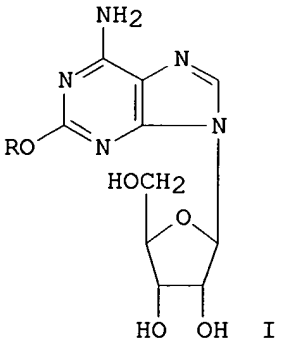
IT **137817-86-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of, in prepn. of adenosine A2 receptor agonists)

RN 137817-86-8 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)-2-(3-phenylpropoxy)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 21 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:185903 HCAPLUS
DOCUMENT NUMBER: 114:185903
TITLE: 2-Aralkoxyadenosines: potent and selective agonists at the coronary artery A2 adenosine receptor
AUTHOR(S): Ueeda, Masayuki; Thompson, Robert D.; Arroyo, Luis H.; Olsson, Ray A.
CORPORATE SOURCE: Dep. Intern. Med., Univ. South Florida, Tampa, FL, 33612, USA
SOURCE: Journal of Medicinal Chemistry (1991), 34(4), 1340-4
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



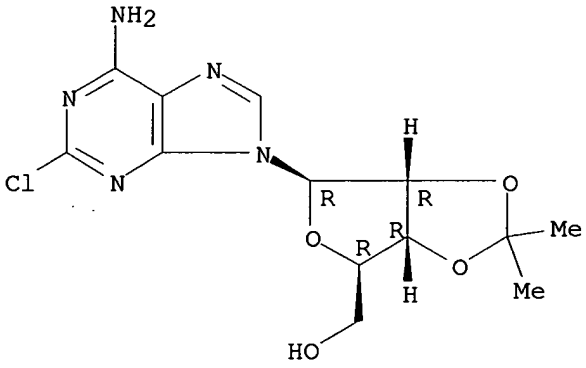
AB A Langendorff guinea pig heart prepn. served for the assay of agonist potency of 26 2-aralkoxyadenosines I (R = Ph, Ph(CH2)n, R1C6H4CH2CH2, R2CH2CH2, n = 2-5; R1 = 2-, 3-, 4-F, 2-, 3-, 4-Cl, 2-, 3-, 4-MeO, 2-, 3-, 4-Me, R2 = 2-, 3-thienyl, 3-indolyl, 1-, 2-naphthyl, 3,4-(MeO)2C6H3, 3,4,5-(MeO)3C6H2] at the A1 and A2 receptors of, resp., the atrioventricular node (conduction block) and coronary arteries ( **vasodilation**). All of the analogs are weak agonists at the A1 receptor, requiring concns. >9 .mu.M to cause heart block. At the A2 receptor 2-phenethoxyadenosine (I; R= PhCH2CH2) is the most potent of the 2-phenylalkyladenosines. The activity of ring-substituted (F, Cl, CH3,

and OCH3) 2-phenethoxyadenosines increases ortho < meta < para. The EC50s of coronary **vasodilation** of 190 pM and an A1/A2 selectivity ratio of 44000. Aryl groups such as thienyl, indoloyl, or naphthyl also support A2 agonist activity. Although the 2-oxoadenosine is 3 times more potent than 2-aminoadenosine, the activities of the Ph derivs. are markedly different; 2-phenoxyadenosine (I; R = Ph) is 23 times weaker than 2-(phenylamino)adenosine (CV-1808).

IT **24639-06-3 56720-43-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with lithium alkoxides or phenoxides, aralkoxyadenosines via)

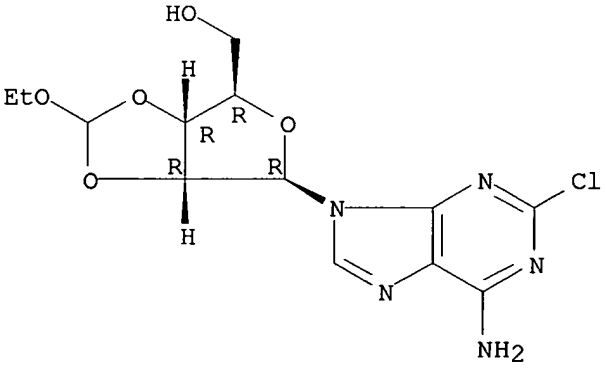
RN 24639-06-3 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 22 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:185902 HCAPLUS
DOCUMENT NUMBER: 114:185902
TITLE: 2-Alkoxyadenosines: potent and selective agonists at the coronary artery A2 adenosine receptor

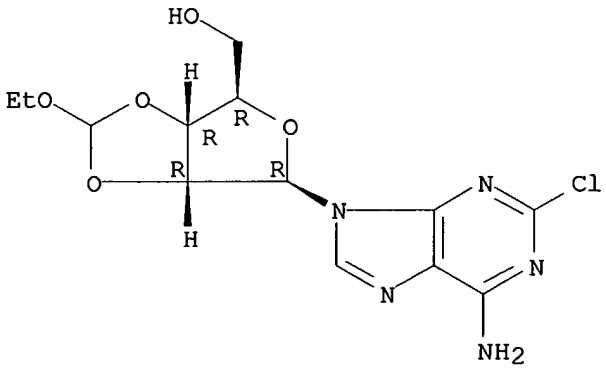
AUTHOR(S): Ueeda, Masayuki; Thompson, Robert D.; Arroyo, Luis H.; Olsson, Ray A.
CORPORATE SOURCE: Dep. Intern. Med., Univ. South Florida, Tampa, FL, 33612, USA
SOURCE: Journal of Medicinal Chemistry (1991), 34(4), 1334-9
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:185902

AB A Langendorff guinea pig heart prepn. served for the assay of agonist activity of a series of 24 2-alkoxyadenosines at the A1 and A2 adenosine receptors of, resp., the atrioventricular node (conduction block) and coronary arteries (**vasodilation**). Activities are low at the A1 receptor and do not show a clear relationship to the size or hydrophobicity of the C(2) substituent. All the analogs are more potent at the A2 receptor, activity varying directly with the size and hydrophobicity of the alkyl group. The most potent analog in this series, 2-(2-cyclohexylethoxy)adenosine, has an EC50 of 1 nM for coronary **vasodilation** and is 8700-fold selective for the A2 receptor.

IT **56720-43-5 131973-27-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alcs., alkoxyadenosine receptor agonists via)

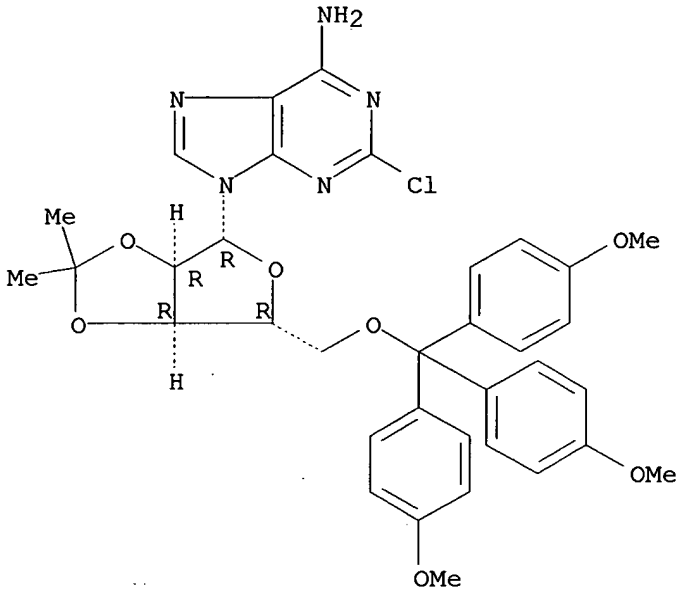
RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

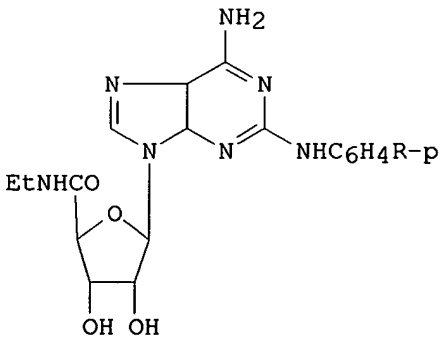



RN 131973-27-8 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)-5'-O-[tris(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 23 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:424426 HCAPLUS
DOCUMENT NUMBER: 113:24426
TITLE: 2-(Arylalkylamino)adenosin-5'-uronamides: a new class of highly selective adenosine A2 receptor ligands
AUTHOR(S): Hutchison, Alan J.; Williams, Michael; De Jesus, Reynalda; Yokoyama, Rina; Oei, Howard H.; Ghai, Geetha R.; Webb, Randy L.; Zoganas, Harry C.; Stone, George A.; Jarvis, Michael F.
CORPORATE SOURCE: Pharm. Div., Ciba-Geigy Corp., Summit, NJ, 07901, USA
SOURCE: Journal of Medicinal Chemistry (1990), 33(7), 1919-24
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:24426
GI



I

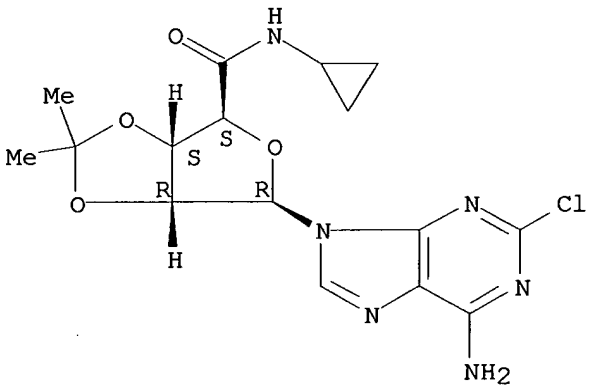
AB The synthesis and receptor-binding profiles at adenosine receptor subtypes for a series of 2-arylalkylamino-adenosine-5'-uronamides is described. Halogenated 2-phenethylamino analogs such as I (R = Cl) show greater than 200-fold selectivity for the A2 receptor subtype on the basis of rat brain receptor binding. The general structure-activity relationship of this series of compds. is discussed both in terms of potency at A2 receptors as well as receptor subtype selectivity. It is possible to introduce a hydrophilic carboxyalkyl substituent to this series such as in CGS 21680A (I; R = HO2CCH2CH2) and still retain good potency and selectivity for A2 receptors. In addn., functional data in a perfused working rat heart model shows that these compds. possess full agonist properties at A2 receptors with I (R = HO2CCH2CH2) having a greater than 1500-fold sepn. between A2 (coronary **vasodilatory**) and A1 (neg. chronotropic) receptor mediated events.

IT **127258-33-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and amination of)

RN 127258-33-7 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



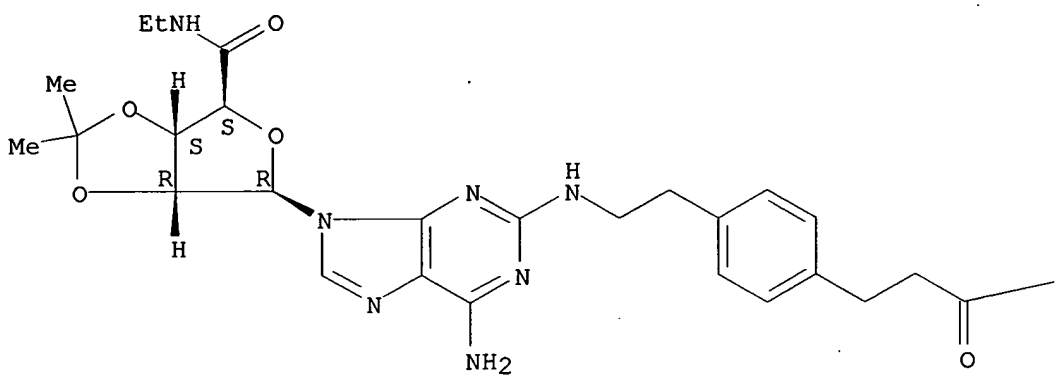

IT **120225-76-5P 120225-77-6P 127258-31-5P**
**127258-34-8P 127258-36-0P 127258-38-2P**
**127258-39-3P 127258-41-7P 127258-43-9P**
**127258-45-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)

RN 120225-76-5 HCAPLUS

CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

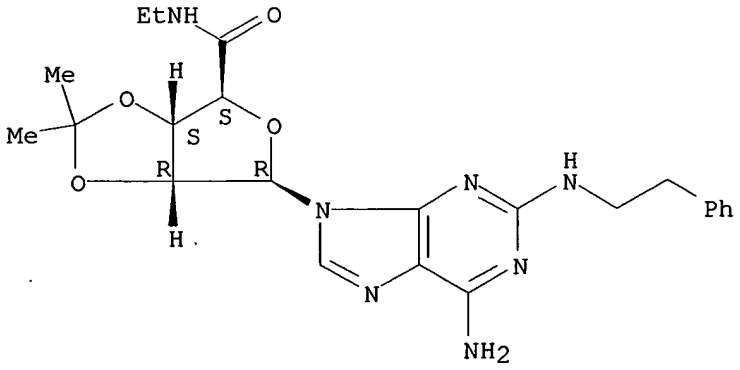


PAGE 1-B

—OBu-t

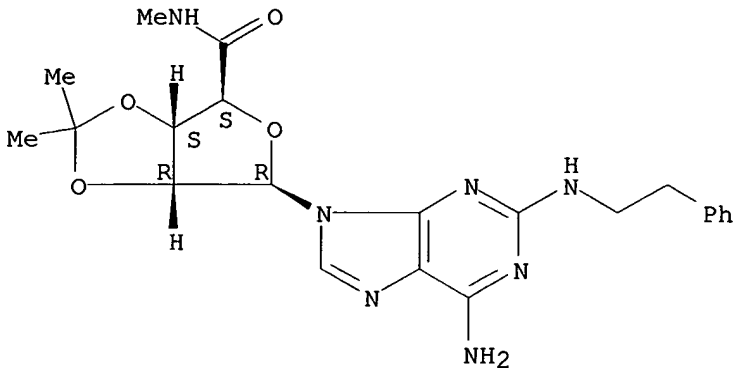
RN 120225-77-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



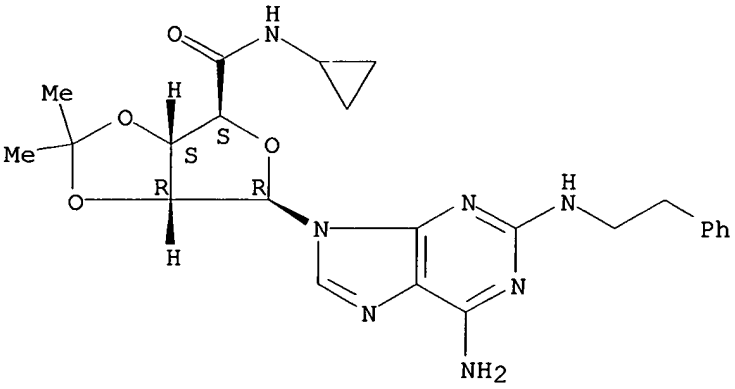
RN 127258-31-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



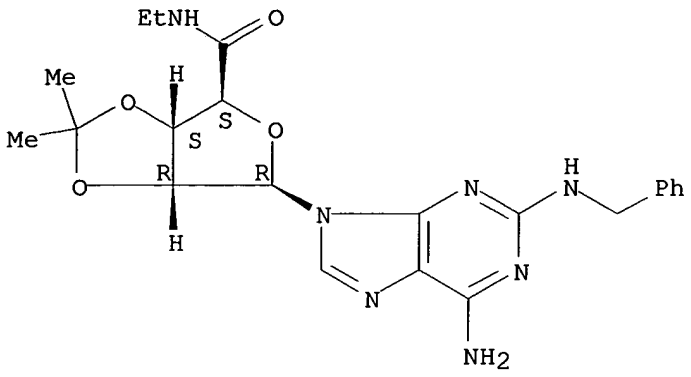
RN 127258-34-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



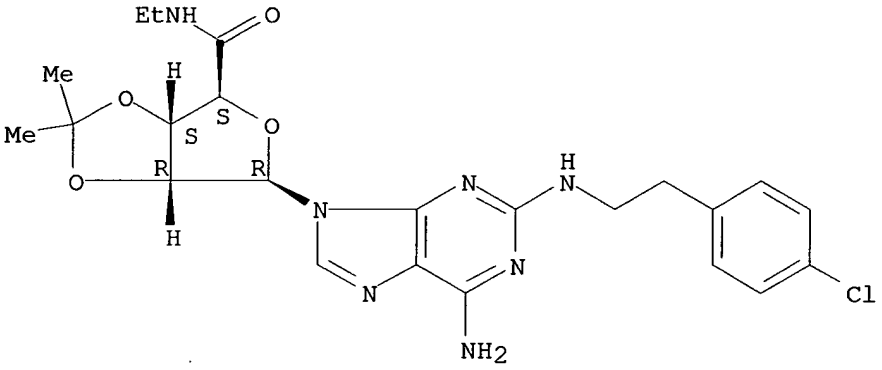
RN 127258-36-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(phenylmethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



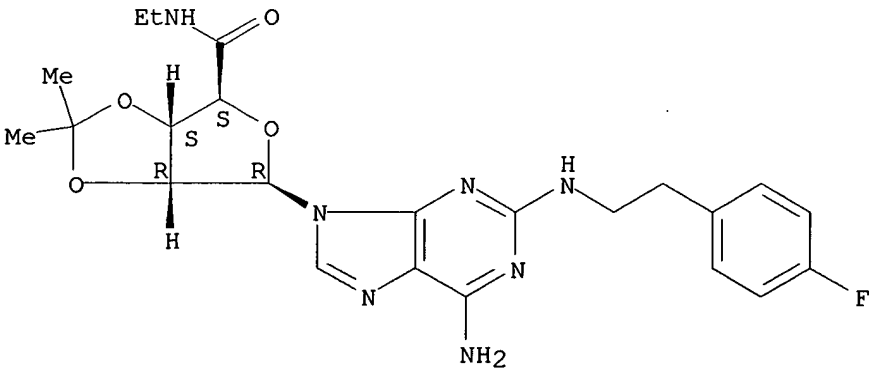
RN 127258-38-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-(4-chlorophenyl)ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

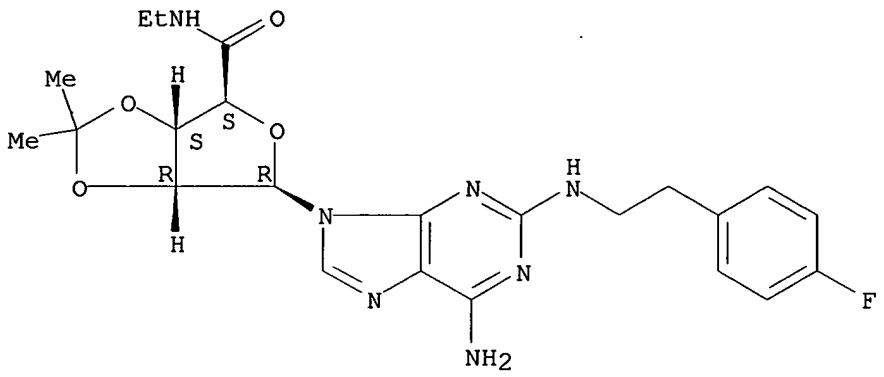
Absolute stereochemistry.



RN 127258-39-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-(4-fluorophenyl)ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

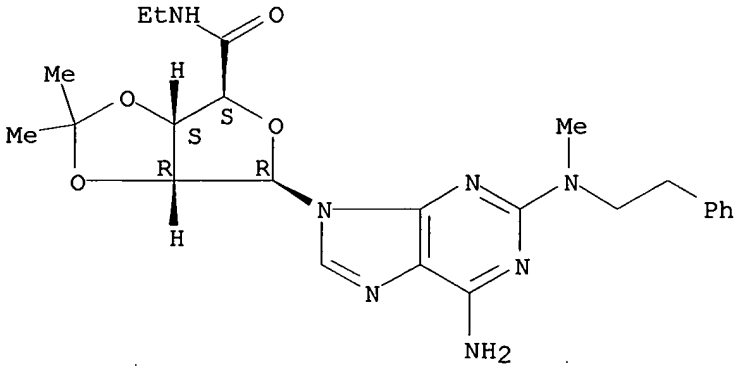
Absolute stereochemistry.





RN 127258-41-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[methyl(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

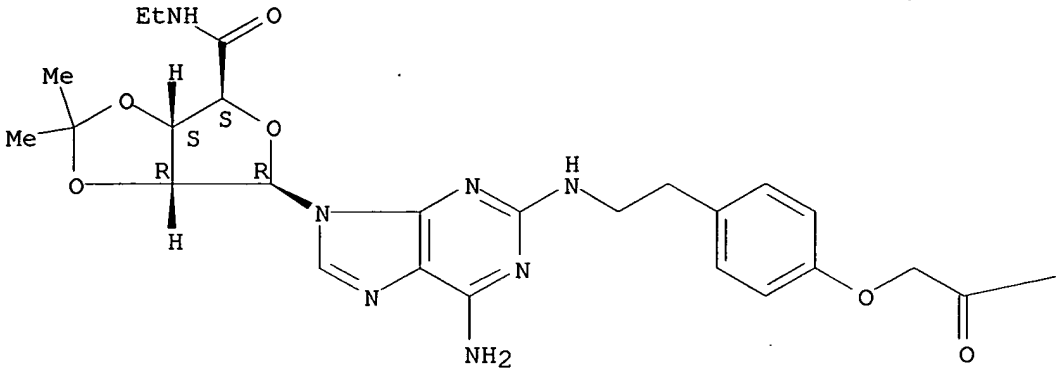
Absolute stereochemistry.



RN 127258-43-9 HCAPLUS
CN Acetic acid, [4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]phenoxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

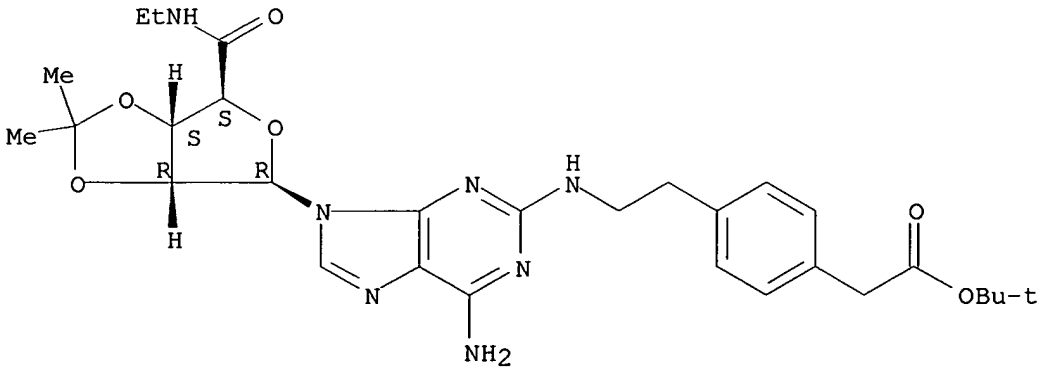


PAGE 1-B

—OBu-t

RN 127258-45-1 HCAPLUS
CN Benzeneacetic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

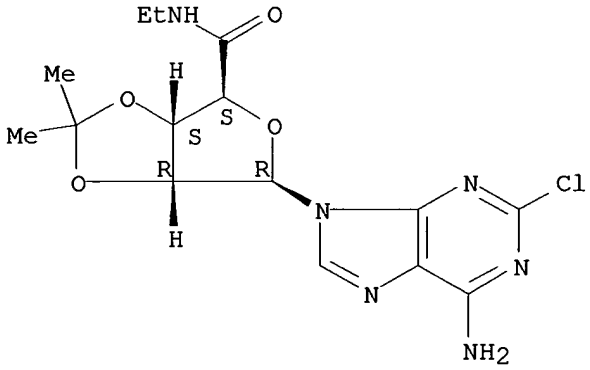
Absolute stereochemistry.



IT **120225-75-4P 127258-29-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

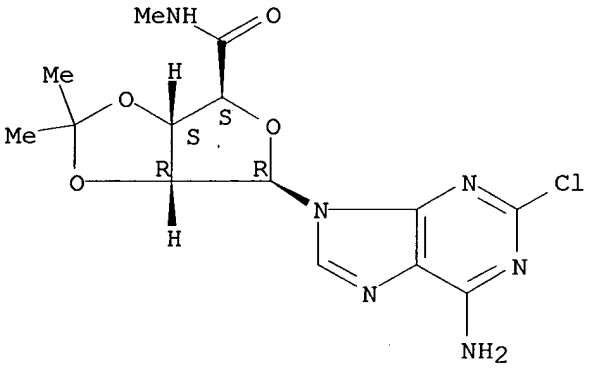
(prepn. and deisopropylidenation or amination of)
RN 120225-75-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



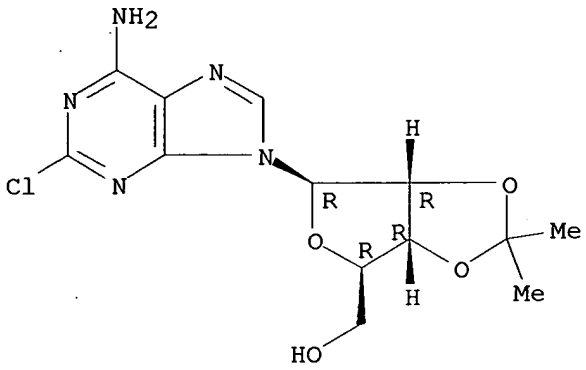

RN 127258-29-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



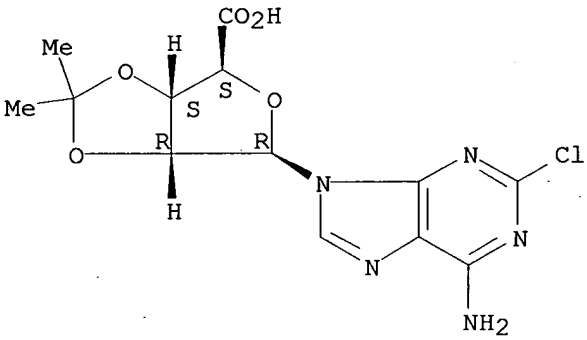

IT **24639-06-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and permanganate oxidn. of)
RN 24639-06-3 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **72209-19-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., chlorination, and amidation of)
RN 72209-19-9 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 24 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:497690 HCAPLUS
DOCUMENT NUMBER: 111:97690
TITLE: Preparation of N-6-aralkyladenosines having selective adenosine A2 receptor binding activity and pharmaceutical compositions containing them
INVENTOR(S): Bridges, Alexander James; Ortwine, Daniel Fred; Trivedi, Bharat Kalidas
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| WO 8803147 | A1 | 19880505 | WO 1987-US2719 | 19871019 |
| W: AU, BB, BG, BR, DK, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU, US, US | | | | |
| RW: AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG | | | | |
| AU 8782761 | A1 | 19880525 | AU 1987-82761 | 19871019 |
| DK 8803577 | A | 19880629 | DK 1988-3577 | 19880629 |
| NO 8802887 | A | 19880629 | NO 1988-2887 | 19880629 |

PRIORITY APPLN. INFO.: US 1986-925185 19861031
US 1987-90830 19870828
WO 1987-US2719 19871019

OTHER SOURCE(S): MARPAT 111:97690

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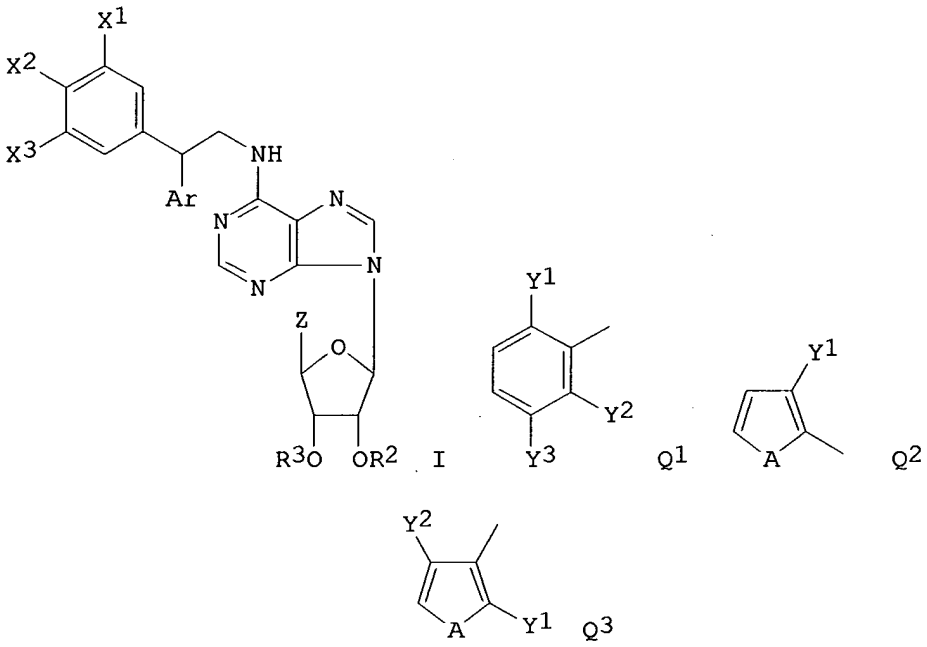


AB The title compds. [I; Ar = Q1, Q2, Q3; A = O, S; X1, X2, X3, Y1, Y2, Y3 = H, halo, alkyl, alkylthio, alkoxy, etc.; R2, R3 = H, alkanoyl, (substituted) benzoyl; or R2R3 = alkylidene; Z = (substituted) Me, dihydroxyphosphono, etc.] and their pharmaceutically acceptable acid addn. salts, useful as cardiovascular agents, analgesics, antipsychotics, etc., are prepd. (E)-2-(2,6-Dimethylphenyl)nitroethene (prepn. given) was treated with PhMgBr in toluene at -30.degree. and the resulting diarylnitroethene was reduced with LiAlH4 to give 2-(2,6-dimethylphenyl)-2-phenylethylamine, which was refluxed with 6-chloropurine riboside in EtOH contg. Et3N for 15 h to give N-6-[2-(2,6-dimethylphenyl)-2-phenylethyl]adenosine (II). In an adenosine receptor binding study, II was > 6 times more strongly bound to A2 receptors than to A1 receptors.

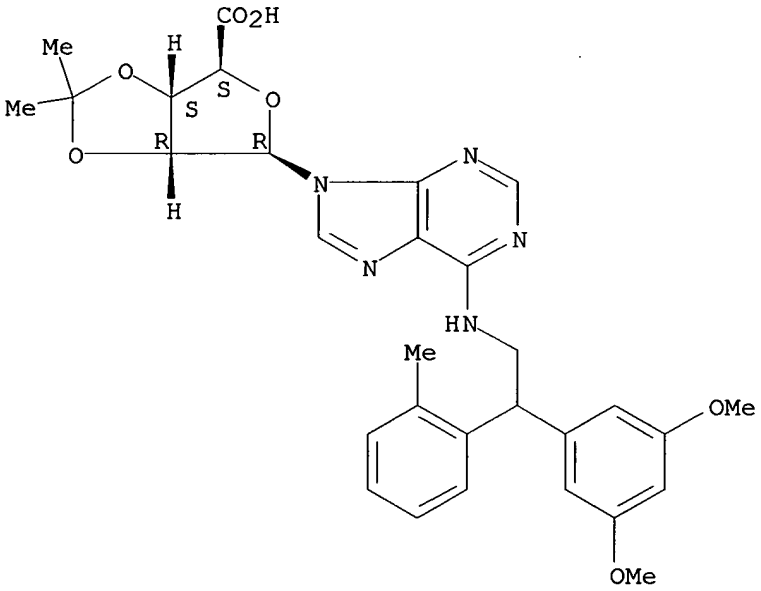
IT **120355-78-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of adenosine derivs. as analgesic and cardiovascular and CNS agents)

RN 120355-78-4 HCAPLUS

CN .beta.-D-Ribofuranuronic acid, 1-deoxy-1-[6-[[2-(3,5-dimethoxyphenyl)-2-(2-methylphenyl)ethyl]amino]-9H-purin-9-yl]-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 25 OF 39 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:213284 HCAPLUS

DOCUMENT NUMBER: 110:213284

TITLE: Preparation of 1'-deoxy-1'-(6-amino-9-purinyl)]-.beta.-D-ribofuranuronic acid amides and thioamides as antihypertensives and pharmaceutical compositions containing them

INVENTOR(S): Gadient, Fulvio; Vogel, Arnold

PATENT ASSIGNEE(S): Sandoz A.-G., Switz.

SOURCE: Brit. UK Pat. Appl., 35 pp.
CODEN: BAXXDU

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

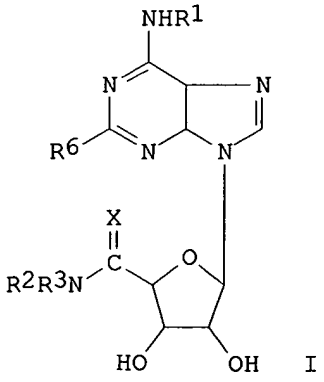
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| GB 2203149 | A1 | 19881012 | GB 1988-7750 | 19880331 |
| GB 2203149 | B2 | 19910213 | | |
| DE 3810551 | A1 | 19881103 | DE 1988-3810551 | 19880329 |
| FR 2613367 | A1 | 19881007 | FR 1988-4356 | 19880330 |

| | | | | |
|---|---|---|---|---|
| BE 1002151 | A5 | 19900807 | BE 1988-374 | 19880330 |
| CH 676121 | A | 19901214 | CH 1988-1228 | 19880331 |
| IL 85969 | A1 | 19920329 | IL 1988-85969 | 19880404 |
| AU 8814151 | A1 | 19881006 | AU 1988-14151 | 19880405 |
| AU 609109 | B2 | 19910426 | | |
| FI 8801571 | A | 19881007 | FI 1988-1571 | 19880405 |
| FI 87463 | B | 19920930 | | |
| FI 87463 | C | 19930111 | | |
| DK 8801834 | A | 19881007 | DK 1988-1834 | 19880405 |
| SE 8801236 | A | 19881017 | SE 1988-1236 | 19880405 |
| JP 63258892 | A2 | 19881026 | JP 1988-84974 | 19880405 |
| NL 8800862 | A | 19881101 | NL 1988-862 | 19880405 |
| ES 2007177 | A6 | 19890601 | ES 1988-1031 | 19880405 |
| HU 48902 | A2 | 19890728 | HU 1988-1638 | 19880405 |
| HU 201955 | B | 19910128 | | |
| ZA 8802384 | A | 19891227 | ZA 1988-2384 | 19880405 |
| AT 8800873 | A | 19910415 | AT 1988-873 | 19880405 |
| AT 393507 | B | 19911111 | | |
| PL 155212 | B1 | 19911031 | PL 1988-271671 | 19880405 |
| CA 1326017 | A1 | 19940111 | CA 1988-563261 | 19880405 |
| US 5219840 | A | 19930615 | US 1991-693891 | 19910501 |

PRIORITY APPLN. INFO.: DE 1987-3711561 19870406
DE 1987-3711562 19870406
DE 1987-3711563 19870406
DE 1987-3711564 19870406
US 1988-176913 19880404
US 1989-455662 19891221

OTHER SOURCE(S): CASREACT 110:213284; MARPAT 110:213284

GI




I

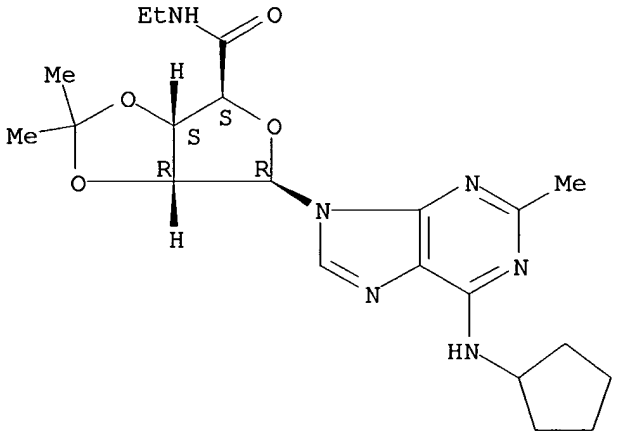
AB The title compds. [I; R1 = H, alkyl, hydroxyalkyl, mercaptoalkyl, aminoalky, cycloalkylalkyl, etc.; R2 = H, alky, hydroxyalky, mercaptoalkyl, aminoalkyl, cycloalkyl, etc.; R3 = H, alkyl, hydroxyalkyl, mercaptoalkyl, aminoalkyl; R6 = halo, alkyl, cycloalkyl, cyano, alkoxy, mercapto, amino, etc.; X = O, S], useful as antihypertensives (no data), are prepd. 1'-Deoxy-1'-(2-methyl-6-cyclopentylamino-9-purinyl)-2,3-isopropylidene-.beta.-D-ribofuranuronic acid N-ethylamide (prepn. given) (1.4 g) in 10 mL 90% F3CCO2H was allowed to stand at room temp. for 1 h to

give 1'-deoxy-1'-(2-methyl-6-cyclopentylamino-9-purinyl)-.beta.-D-ribofuranuronic acid N-ethylamide.

IT **120465-39-6P 120465-42-1P 120465-43-2P 120465-44-3P 120465-45-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of)

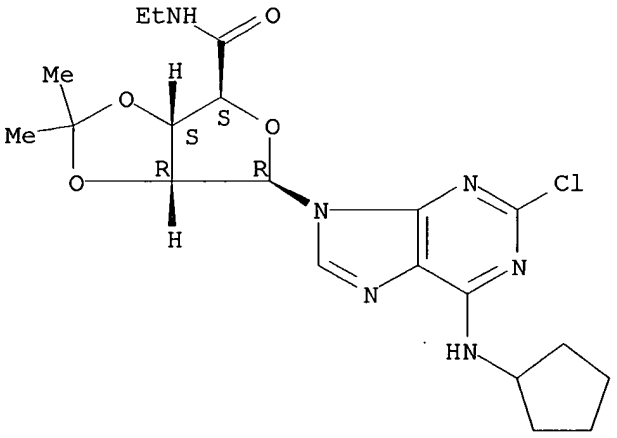
RN 120465-39-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-(cyclopentylamino)-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



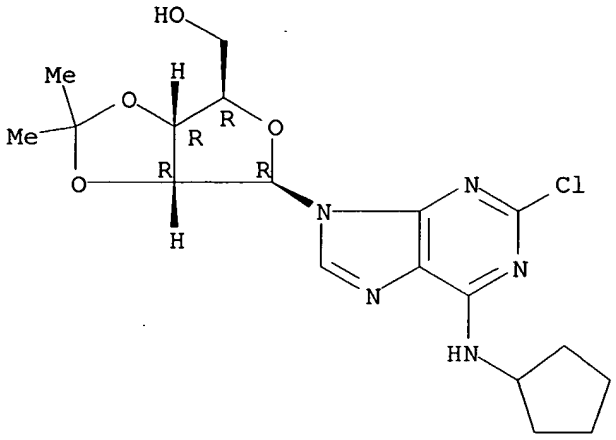

RN 120465-42-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-(cyclopentylamino)-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



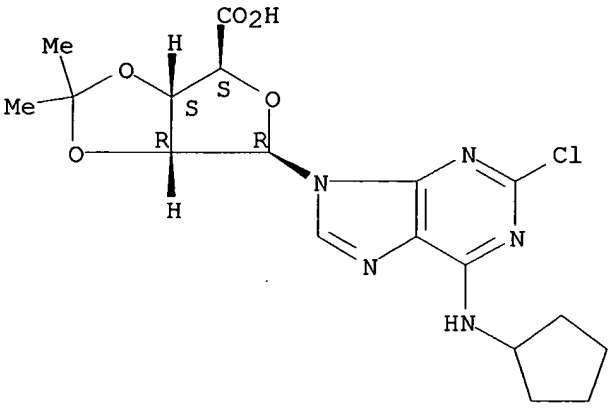

RN 120465-43-2 HCAPLUS
CN Adenosine, 2-chloro-N-cyclopentyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



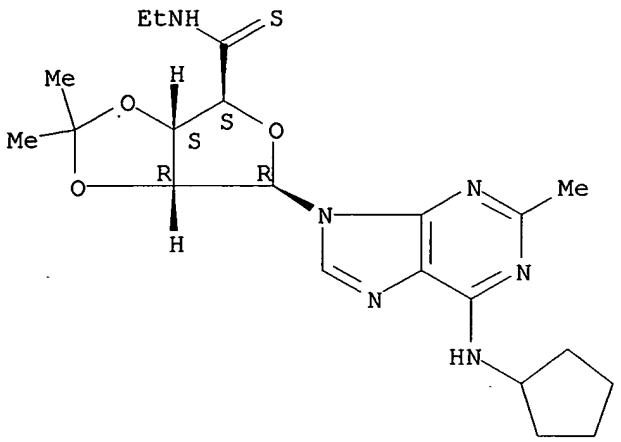
RN 120465-44-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-[2-chloro-6-(cyclopentylamino)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 120465-45-4 HCAPLUS
CN .beta.-D-Ribofuranuronothioamide, 1-[6-(cyclopentylamino)-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

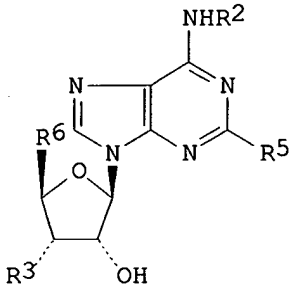
Absolute stereochemistry.




L29 ANSWER 26 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:193332 HCAPLUS
DOCUMENT NUMBER: 110:193332
TITLE: Preparation of adenosine-5'-carboxamide derivatives as adenosine-2 receptor agonists, antipsychotics, and antihypertensives and pharmaceutical compositions containing them
INVENTOR(S): Hutchison, Alan J.
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 277917 | A2 | 19880810 | EP 1988-810050 | 19880129 |
| EP 277917 | A3 | 19900328 | | |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| FI 8800405 | A | 19880805 | FI 1988-405 | 19880129 |
| JP 63201196 | A2 | 19880819 | JP 1988-21410 | 19880202 |
| DD 284679 | A5 | 19901121 | DD 1988-312611 | 19880202 |
| DK 8800544 | A | 19880805 | DK 1988-544 | 19880203 |
| NO 8800469 | A | 19880805 | NO 1988-469 | 19880203 |
| AU 8811233 | A1 | 19880818 | AU 1988-11233 | 19880203 |
| HU 46334 | A2 | 19881028 | HU 1988-509 | 19880203 |
| HU 199155 | B | 19900129 | | |
| ZA 8800755 | A | 19891025 | ZA 1988-755 | 19880203 |

PRIORITY APPLN. INFO.: US 1987-11169 19870204
OTHER SOURCE(S): MARPAT 110:193332
GI



I

AB The title compds. [I; R2 = H, alkyl, aralkyl; R3 = H, OH; R5 = NRR1 where R = H, alkyl and R1 = cycloalkyl, cycloalkylalkyl, 2-norbornanyl, etc.; R6 = R4NHCO where R4 = H, alkyl, aralkyl, cycloalkyl, hydroxyalkyl] (II) and their pharmaceutically acceptable salts, useful as adenosine-2 receptor agonists, antipsychotics, antithrombotics, and antihypertensives, are prepd. A mixt. of 2-chloro-2',3'-O-isopropylideneadenosine-5'-N-ethylcarboxamide and 2-phenethylamine was heated at 130.degree. for 2 h to give 2-(2-phenethylamino)-2',3'-O-isopropylideneadenosine-5'-N-ethylcarboxamide, which was heated with 1N HCl at 65.degree. for 1 h to give 2-(2-phenethylamino)-5'-N-ethylcarboxamide (III). In vivo studies of the adenosine-2 receptor agonistic activity of II using spontaneously **hypertensive** rats showed that II effectively lowered the blood pressure without any significant effect on the heart rate. One thousand tablets were prepd. from III 100.00, lactose 2400.00, corn starch 125.00, polyethyleneglycol 6000 150.00, Mg stearate 40.00 g, and water q.s.

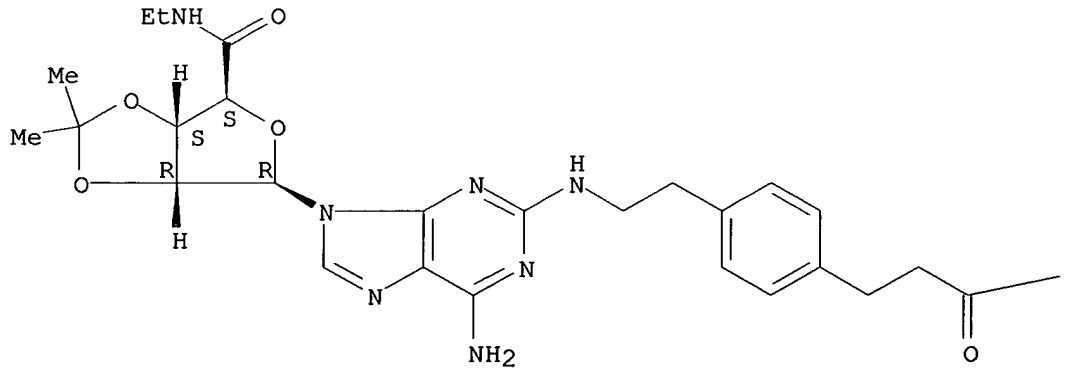
IT **120225-76-5P 120225-77-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of adenosinecarboxamide derivs. as CNS and cardiovascular agents)

RN 120225-76-5 HCAPLUS

CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

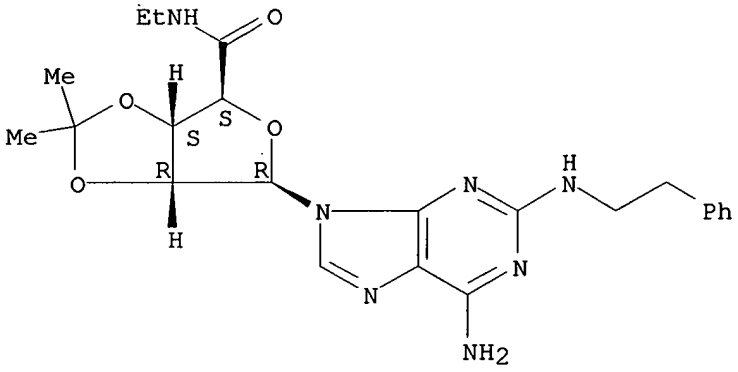
PAGE 1-A



—OBu-t

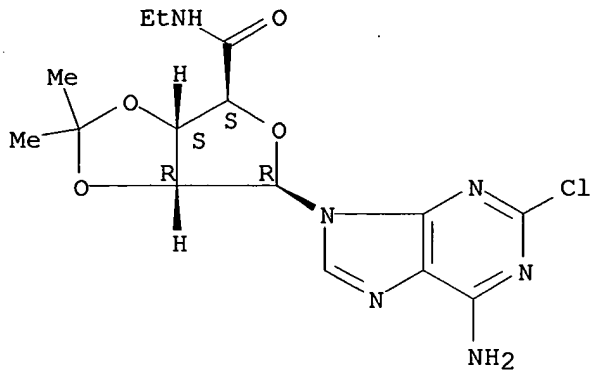
RN 120225-77-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




IT **120225-75-4 120225-76-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of adenosinecarboxamide derivs. as CNS and cardiovascular agents)
RN 120225-75-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

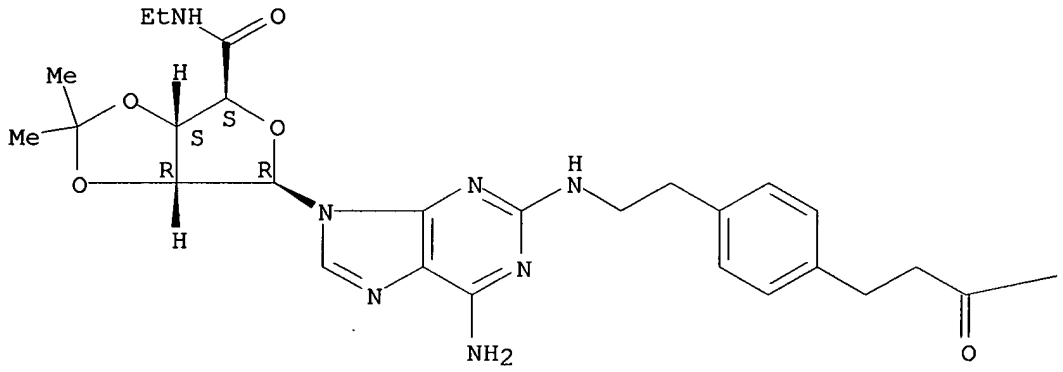
Absolute stereochemistry.




RN 120225-76-5 HCAPLUS
CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

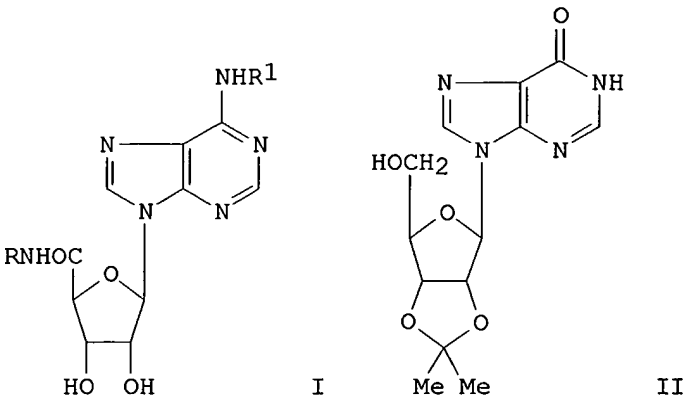



PAGE 1-B

—OBu-t

L29 ANSWER 27 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:497868 HCAPLUS

DOCUMENT NUMBER: 105:97868
TITLE: N6-Substituted N-alkyladenosine-5'-uronamides: bifunctional ligands having recognition groups for A1 and A2 adenosine receptors
AUTHOR(S): Olsson, R. A.; Kusachi, Shozo; Thompson, Robert D.; Ukena, Dieter; Padgett, William; Daly, John W.
CORPORATE SOURCE: Coll. Med., Univ. South Florida, Tampa, FL, 33612, USA
SOURCE: Journal of Medicinal Chemistry (1986), 29(9), 1683-9
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 105:97868
GI



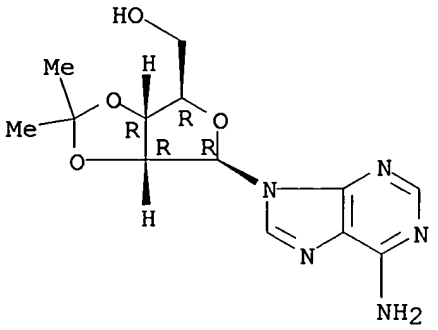

I II

AB Nineteen title uronamides I (R = Et, Me2CH, Me, PhCH2, etc; R1 = Me, Et2CH, cyclohexyl, p-MeOC6H4, Et2CH, etc.) were prepd. from inosine II by sequential oxidn. with CrO3 to give uronic acid, treatment with SO2Cl2 in DMF to give 6-chloro-5'-uronic acid chloride, amidation with RNH2 to give 6-chloro uronamides, and a treatment with R1NH2 at elevated temp. to give I. Coronary **vasodilating** activity and potency of I at adenosine receptors are given.

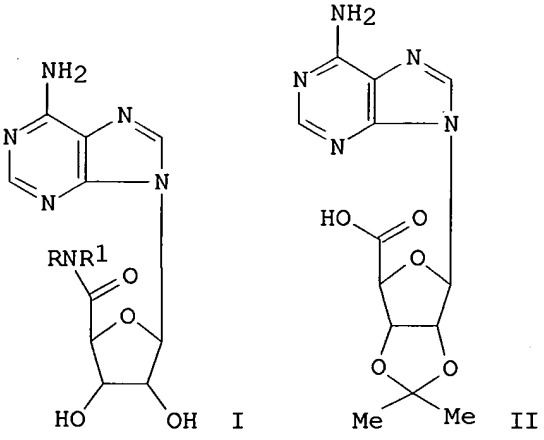
IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of)

RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 28 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:129239 HCAPLUS
DOCUMENT NUMBER: 92:129239
TITLE: Modification of the 5' position of purine nucleosides. 2. Synthesis and some cardiovascular properties of adenosine-5'-(N-substituted)carboxamides
AUTHOR(S): Prasad, Raj Nandan; Bariana, Dilbagh S.; Fung, Anthony; Savic, Milica; Tietje, Karin; Stein, Herman H.; Brondyk, Harold; Egan, Richard S.
CORPORATE SOURCE: Org. Chem. Res., Abbott Lab., Ltd., Montreal, QC, H3C 3K6, Can.
SOURCE: Journal of Medicinal Chemistry (1980), 23(3), 313-19
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

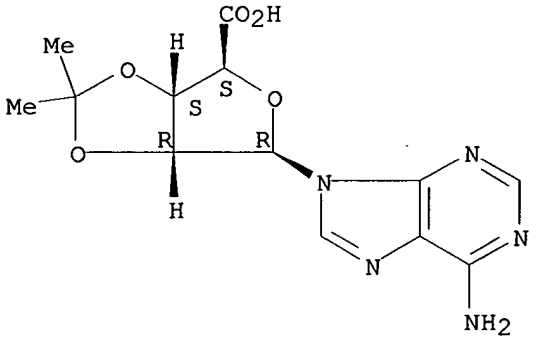


AB About 35 adenosinecarboxamides I [R = H, R1 = Me, Et, PhOCH2CH2, Et2NCH2CH2, cyclopropyl, CH2:CHCH2, Ph, adamantyl, etc.; R = R1 = CH2:CHCH2; or (RNR1) = piperidino, morpholino, etc.] and several analogs of I contg. N1-oxide function or 2',3'-substituents were prepd. from II. II was chlorinated with SOCl2, the acid chloride was amidated, and the product was deisopropylidenated to give I. Alternatively II was deisopropylidenated and then converted into the ClCH2CH2 ester, which was

amidated to give I. All the compds. prepd. were evaluated for coronary sinus PO2 activity in dogs (extensive data given). 1H-NMR spectra of some of the compds. were examd. and conformations are discussed.

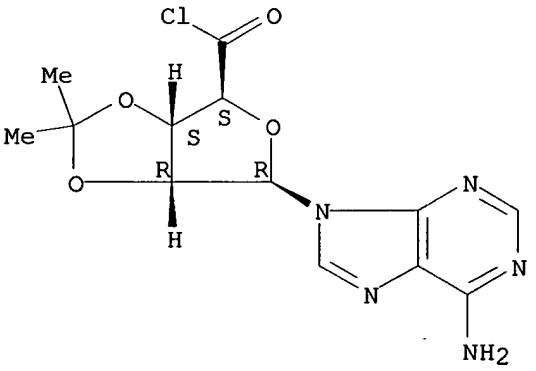
IT **19234-66-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(chlorination or deisopropylidenation of)
RN 19234-66-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **39491-49-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and amidation of)
RN 39491-49-1 HCAPLUS
CN .beta.-D-Ribofuranuronoyl chloride, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

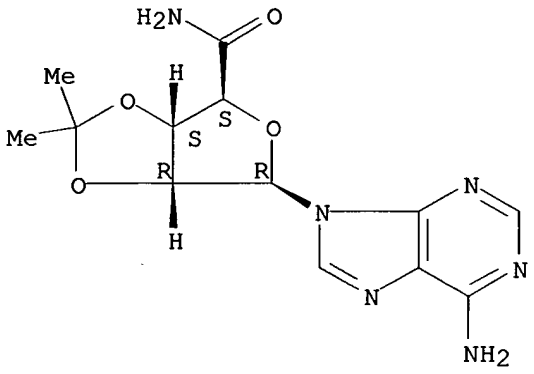
Absolute stereochemistry.



IT **35788-22-8P 54925-48-3P 72758-39-5P**
**72758-40-8P 72758-41-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)
RN 35788-22-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-

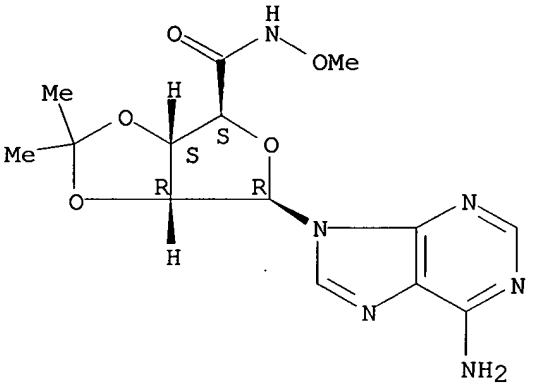
methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



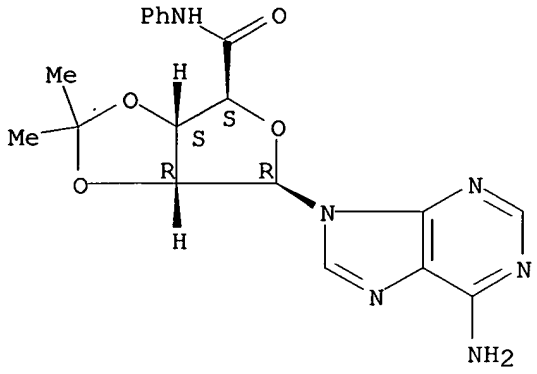
RN 54925-48-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-methoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



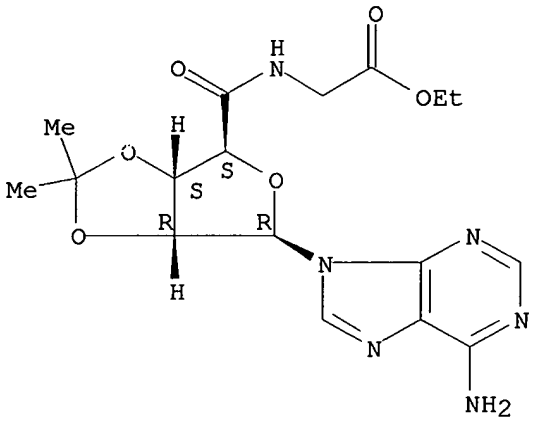
RN 72758-39-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-N-phenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



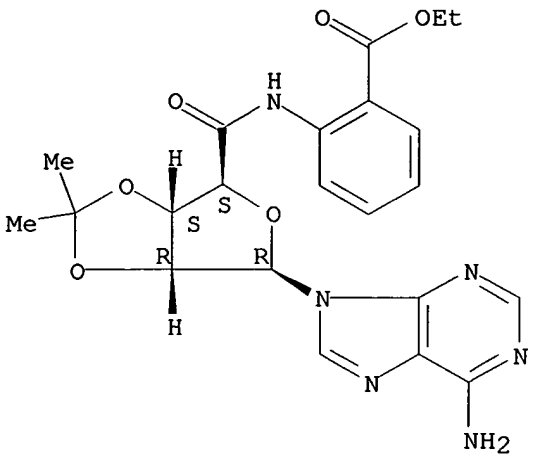

RN 72758-40-8 HCAPLUS
CN Glycine, N-[1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronoyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



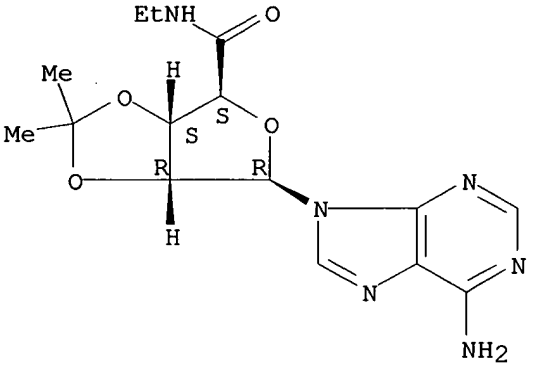

RN 72758-41-9 HCAPLUS
CN Benzoic acid, 2-[[1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronoyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



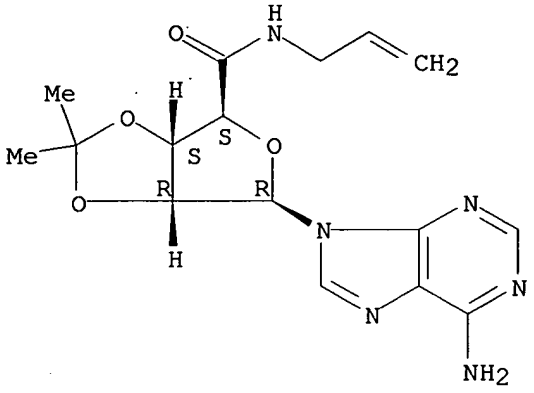
IT **39491-53-7P 58048-27-4P 58048-28-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., deisopropylidenaton, and cardiovascular properties of)
RN 39491-53-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



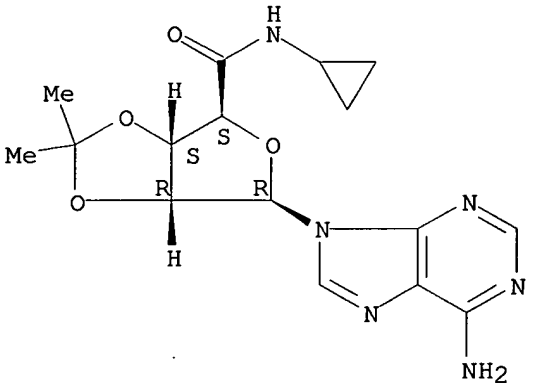
RN 58048-27-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-N-2-propenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 58048-28-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 29 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:538137 HCAPLUS
DOCUMENT NUMBER: 91:138137
TITLE: Inhibition of adenosine uptake in human erythrocytes by adenosine-5'-carboxamides, xylosyladenine, dipyridamole, hexobendine, and p-nitrobenzylthioguanosine
AUTHOR(S): Turnheim, Klaus
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria
SOURCE: Biochemical Pharmacology (1978), 27(18), 2191-7
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Adenosine (I) uptake by human erythrocytes at 0.degree. consisted of a saturable and a concn.-proportional component, the latter representing uptake into a pericellular compartment inaccessible to inulin. The apparent Km for I was 2.4 .times. 10-6M. Xylosyladenine and adenosine-5'-carboxamide derivs. were weak inhibitors of the saturable

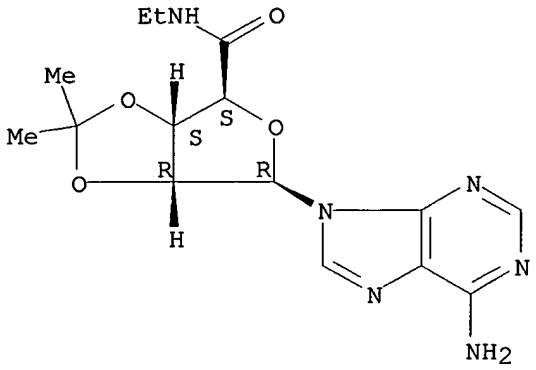
component of I uptake with apparent Ki values .gtoreq.10-fold higher than the Km for I. The affinity of the I nucleosides appeared to depend on the 3'-hydroxyl group and its erythro configuration, and also on the 5'-substituent. Dipyridamole, hexobendine, and p-nitrobenzylthioguanosine had Ki values .gtoreq.10-fold lower than the Km for I. The steric requirements for the binding of adenine furanosides to the putative smooth muscle receptors mediating **vasodilation**, and of the saturable cellular uptake mechanism, were different.

IT **39491-53-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(adenosine transport by erythrocyte response to)

RN 39491-53-7 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L29 ANSWER 30 OF 39 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1979:80897 HCAPLUS

DOCUMENT NUMBER: 90:80897

TITLE: Effects of a 2',3',5'-substituted adenosine derivative on systemic and coronary hemodynamics and on cardiac metabolism in the anesthetized dog

AUTHOR(S): Schuetz, W.; Raberger, G.; Kraupp, O.

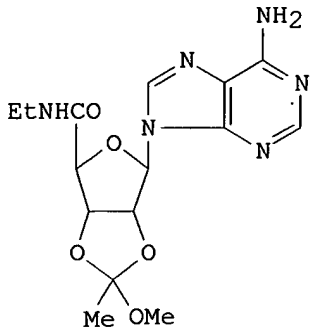
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria

SOURCE: Arzneimittel-Forschung (1978), 28(11), 2079-82
CODEN: ARZNAD; ISSN: 0004-4172

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I

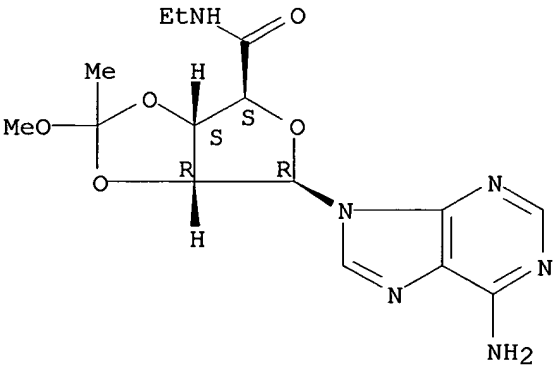
AB The adenosine deriv. 744-98 (I) [**62622-78-0**] (5 .mu.g/kg, i.v.) increased 5 fold the coronary sinus outflow in anesthetized, closed chest dogs. This increase remained 3 times higher than the control level 4 h after I administration. Total peripheral resistance decreased markedly, accompanied by a baroreceptor-mediated increased in heart rate, left ventricular pressure curve, and myocardial O consumption. The myocardial O extn. ratio for glucose [50-99-7] greatly exceeded the aerobic metabolic requirement. Blood sugar levels and glucose uptake by the heart increased, whereas plasma free fatty acid levels decreased markedly, without consistent changes in myocardial free fatty acid balance.

IT **62622-78-0**
RL: BIOL (Biological study)
(circulation and heart metab. response to)

RN 62622-78-0 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 31 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:67008 HCAPLUS
DOCUMENT NUMBER: 90:67008
TITLE: Evidence for glucagon-releasing activity of vasoactive adenosine analogs in the conscious dog
AUTHOR(S): Schuetz, W.; Raberger, G.; Kraupp, O.
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria

SOURCE: Naunyn-Schmiedeberg's Archives of Pharmacology (1978), 304(3), 249-54
CODEN: NSAPCC; ISSN: 0028-1298
DOCUMENT TYPE: Journal
LANGUAGE: English

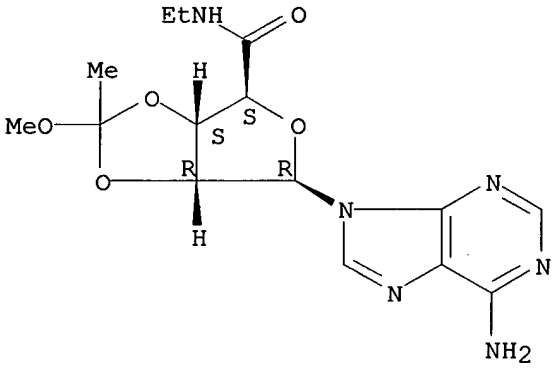
AB An investigation was carried out in conscious dogs concerning the effects of 3 adenosine derivs., 744-96 [35920-39-9], 744-98 [**62622-78-0**], 744-99 [61014-07-1], with pronounced and long-lasting coronary dilator activity, on glucagon [9007-92-5] release. All 3 compds. (10 .mu.g/kg, i.v.) induced a sustained increase in plasma glucose and a decrease in plasma free fatty acids concn.; concomitantly, plasma glucagon levels rose 2-3 fold. Changes in plasma insulin [9004-10-8] concn. were relatively small and not significant. A simultaneous fall in arterial blood pressure was also obsd. A lowering of blood pressure of similar magnitude by Na nitroprusside infusion in control expts. failed to show any effect on plasma glucagon level.

IT **62622-78-0**
RL: BIOL (Biological study)
(glucagon release response to)

RN 62622-78-0 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L29 ANSWER 32 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:499693 HCAPLUS
DOCUMENT NUMBER: 89:99693
TITLE: Coronary dilatory action of adenosine analogs: a comparative study
AUTHOR(S): Raberger, G.; Schuetz, W.; Kraupp, O.
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria
SOURCE: Archives Internationales de Pharmacodynamie et de Therapie (1977), 230(1), 140-9
CODEN: AIPTAK; ISSN: 0003-9780
DOCUMENT TYPE: Journal
LANGUAGE: English

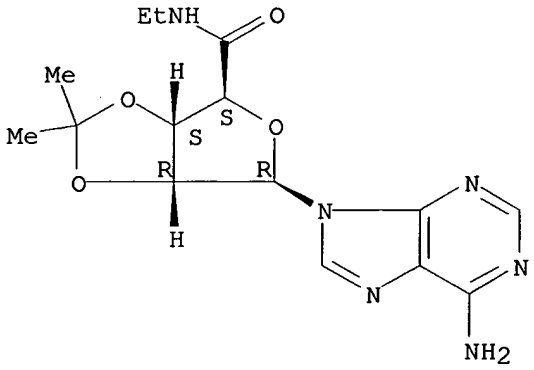
AB The coronary-dilatory action of 23 adenosine [58-61-7] analogs was investigated on a comparative basis after i.v. administration to anesthetized dogs. Substitution in position 5' of adenosine with a CO2H group and esterification led to a 50-100-fold increase in coronary

efficacy (flow increase integrated over the time of action). Amidation of the carboxylic acid analog further enhanced the coronary efficacy. The most effective analog, adenosine-5'-ethylcarboxamide [35920-39-9], showed 20,000 times greater activity than adenosine. Addnl. substitution in positions 2' and 3' with NO2, O-methoxymethylidene, or O-methoxyethylidene resulted in a delayed onset and prolonged duration of action.

IT **39491-53-7 66822-84-2**
RL: BIOL (Biological study)
(coronary **vasodilatory** activity of)

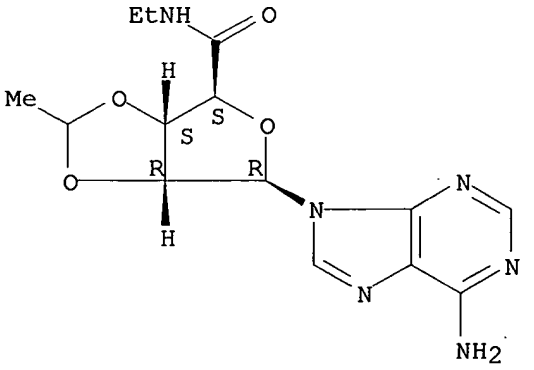
RN 39491-53-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 66822-84-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-ethylidene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

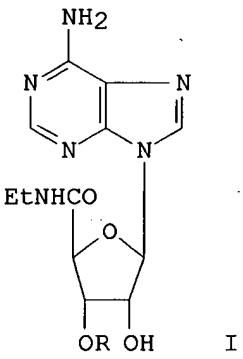



L29 ANSWER 33 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:152935 HCAPLUS
DOCUMENT NUMBER: 88:152935
TITLE: Acylated .beta.-D-1-(6-amino-9H-purin-9-yl)-1-deoxyribofuranuronic acid ethyl amides

INVENTOR(S): Klemm, Kurt; Pruesse, Wolfgang; Schoetensack, Wolfgang; Kraupp, Otto
PATENT ASSIGNEE(S): Byk-Gulden Lomberg Chemische Fabrik G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 2730846 | A1 | 19780119 | DE 1977-2730846 | 19770708 |
| PRIORITY APPLN. INFO.: | | | LU 1976-75374 | 19760713 |

GI




I

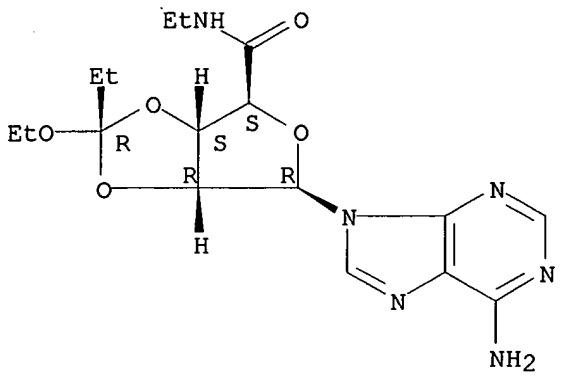
AB The title compds. I (R = Ac, COEt) were prepd. by acylating I (R = H). Thus, I (R = H) was treated with MeC(OMe)3 to give 2,3-O-methoxyethylidene deriv., which was hydrolyzed with aq. HOAc to give 85% I (R = Ac). I had **vasodilator**, antihypertensive, and stimulating effects on the heart (no data).

IT **62622-81-5P 66255-01-4P 66255-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)

RN 62622-81-5 HCAPLUS

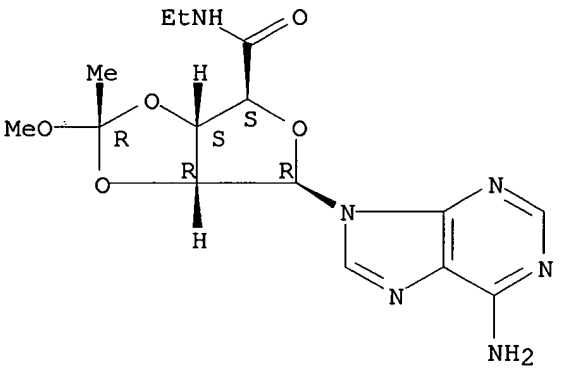
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-ethoxypropylidene)-N-ethyl-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



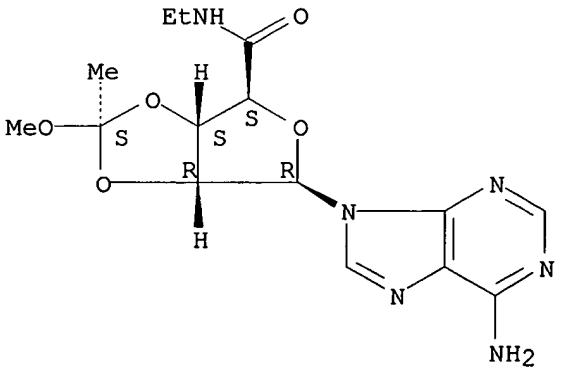
RN 66255-01-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-ethyl-2,3-O-(1-methoxyethylidene)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 66255-02-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-ethyl-2,3-O-(1-methoxyethylidene)-, (S)- (9CI) (CA INDEX NAME)

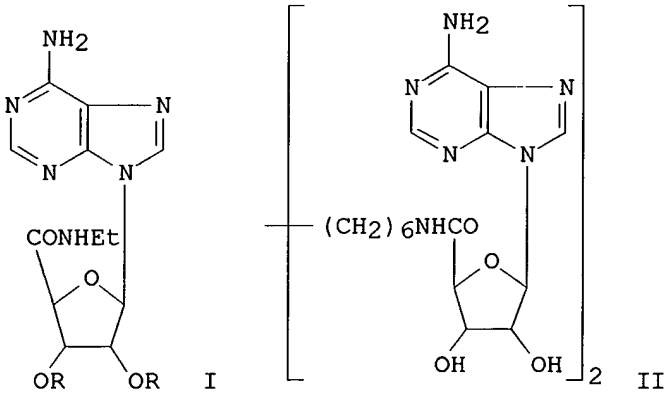
Absolute stereochemistry.



L29 ANSWER 34 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:7312 HCAPLUS
DOCUMENT NUMBER: 88:7312
TITLE: .beta.-D-1-(6-Amino-9H-purin-9-yl)-1-deoxyribofuranuronic acid derivatives
INVENTOR(S): Kraupp, Otto
PATENT ASSIGNEE(S): Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 35 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 2610985 | A1 | 19770929 | DE 1976-2610985 | 19760316 |

PRIORITY APPLN. INFO.: DE 1976-2610985 19760316
GI

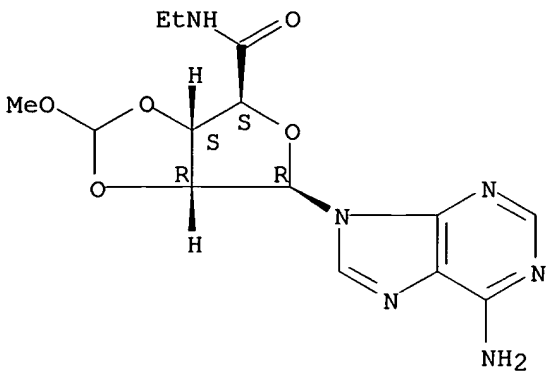



AB The title compds. I (R = NO2, R2 = CHOMe) were prepd. by treating I (R = H) with HNO3 or HC(OMe)3. The amide II was obtained by treating Me ester with H2N(CH2)12NH2. I and II had renal **vasodilator,** antihypertensive, heart stimulant, hypolipemic, and glucose mobilizing activity (no data).

IT **62622-77-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 62622-77-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(methoxymethylene)- (9CI) (CA INDEX NAME)

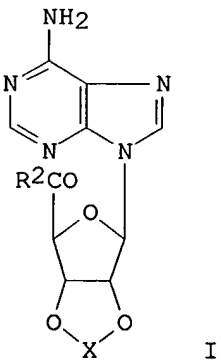
Absolute stereochemistry.



L29 ANSWER 35 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1977:171786 HCAPLUS
DOCUMENT NUMBER: 86:171786
TITLE: 1-Deoxy-2,3-O-alkylideneribofuranuronic acid derivatives
INVENTOR(S): Klemm, Kurt; Mengel, Rudolf; Schoetensack, Wolfgang; Kraupp, Otto
PATENT ASSIGNEE(S): Byk-Gulden Lomberg Chemische Fabrik G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 39 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 2632951 | A1 | 19770210 | DE 1976-2632951 | 19760722 |
| PRIORITY APPLN. INFO.: | | | LU 1975-73052 | 19750724 |

GI



I

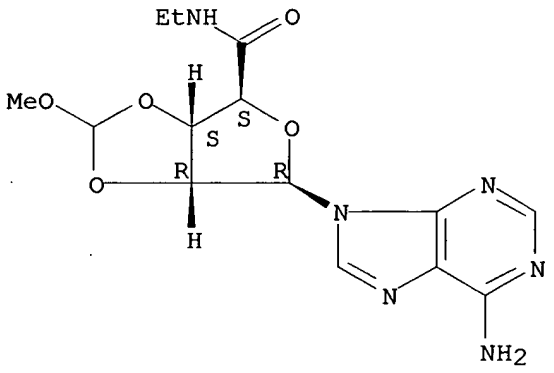
AB (Aminopurinyl)deoxyribofuranuronamides I [X = RC(OR1), R = H, Me, Et, R1 = Me, Et; R2 = NHR3, R3 = Et, Bu, CHMe2] and ester I [X = RC(OR1), R = Me,

R1 = Me, R2 = OMe], possessing inotropic and **vasodilating** activities, were prepd. in 31-96% yields by a.) aminolysis of I [X = MeC(OMe), R2 = OMe], b.) acylation of I (X = H2, R2 = NHR3) by RC(OR1)3, and acylation of I (X = H2, R2 = OMe) using RC(OR1)3.

IT **62622-77-9P 62622-78-0P 62622-79-1P 62622-80-4P 62622-81-5P 62622-82-6P 62622-83-7P 62622-84-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

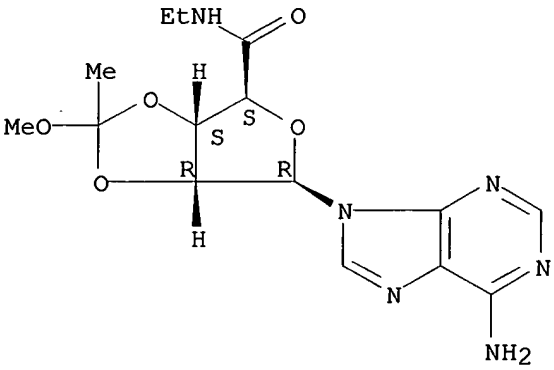
RN 62622-77-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(methoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



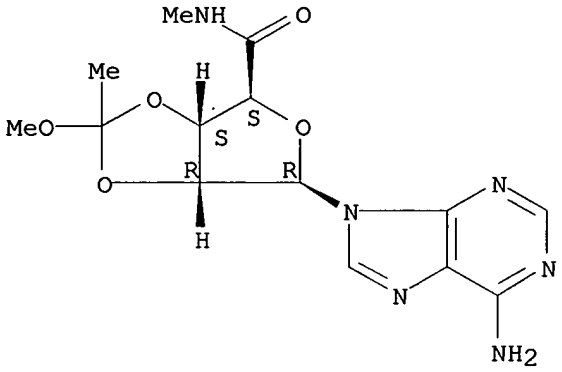

RN 62622-78-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



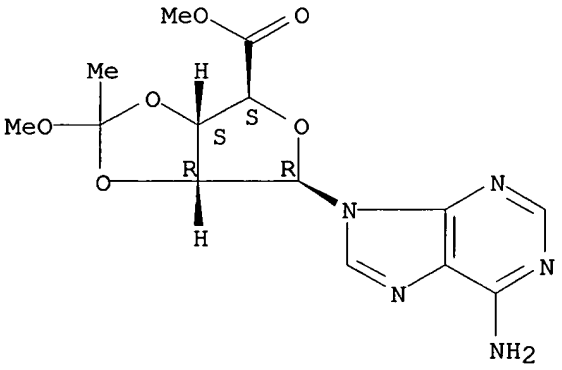

RN 62622-79-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



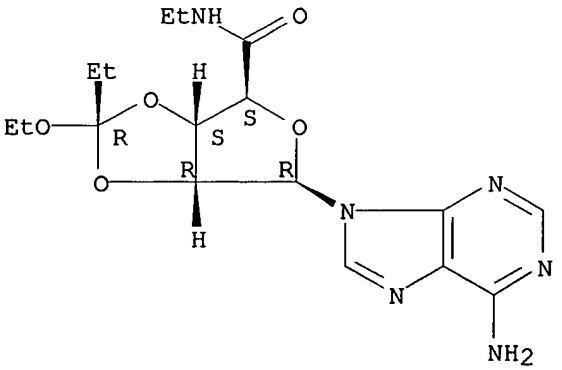

RN 62622-80-4 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



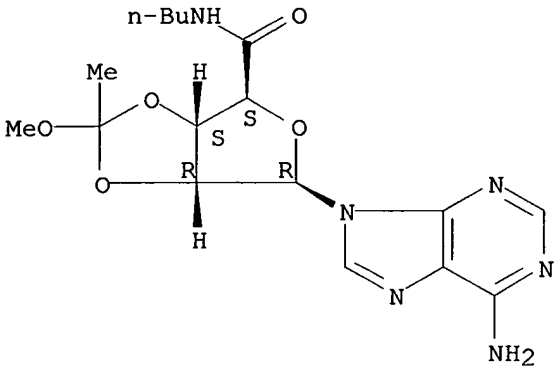

RN 62622-81-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-ethoxypropylidene)-N-ethyl-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



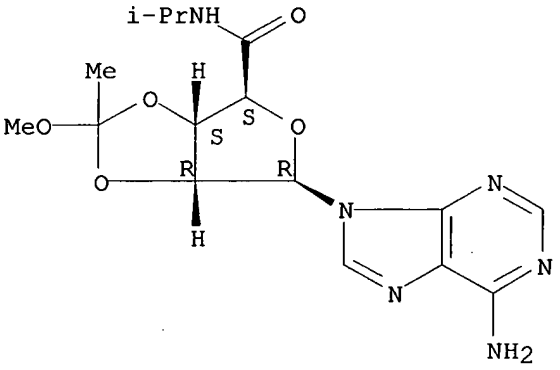
RN 62622-82-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-butyl-1-deoxy-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



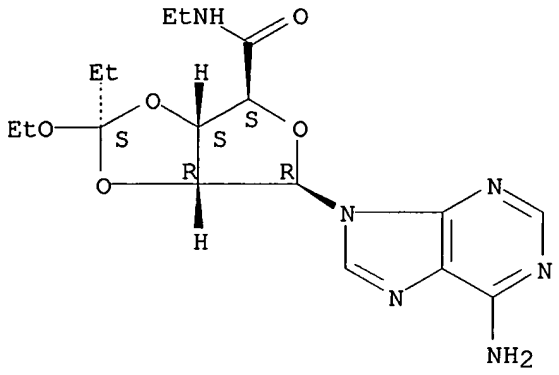

RN 62622-83-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

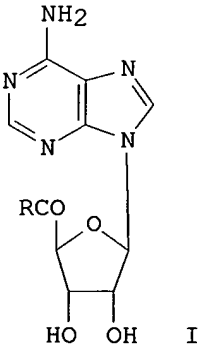



RN 62622-84-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-ethoxypropylidene)-N-ethyl-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 36 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1976:516540 HCAPLUS
DOCUMENT NUMBER: 85:116540
TITLE: Modification of the 5' position of purine nucleosides. 1. Synthesis and biological properties of alkyl adenosine-5'-carboxylates
AUTHOR(S): Prasad, Raj N.; Fung, Anthony; Tietje, Karin; Stein, Herman; Brondyk, Harold D.
CORPORATE SOURCE: Abbott Lab., Ltd., Montreal, QC, Can.
SOURCE: Journal of Medicinal Chemistry (1976), 19(10), 1180-6
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



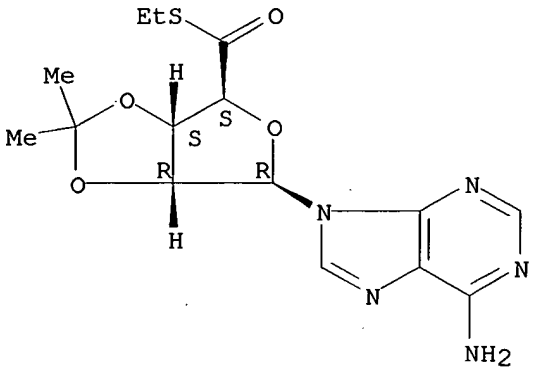
I

AB Of 16 title esters (I; R = lower alkyl, substituted alkyl, allyl, propargyl, cyloalkyl), prepd. by the reaction of the appropriate alc. with adenosine-5'-carboxylic acid chloride [41110-75-2], most were nontoxic and caused prolonged increases in coronary sinus PO2 when administered to anesthetized dogs. The Et ester (I, R = Et) [50663-70-2] was most active, giving a rapid increase of PO2 on the order of 100% lasting .apprx.30 min when given i.v. at 50 .mu.g/kg. Structure-activity relations were discussed.

IT **59882-05-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)

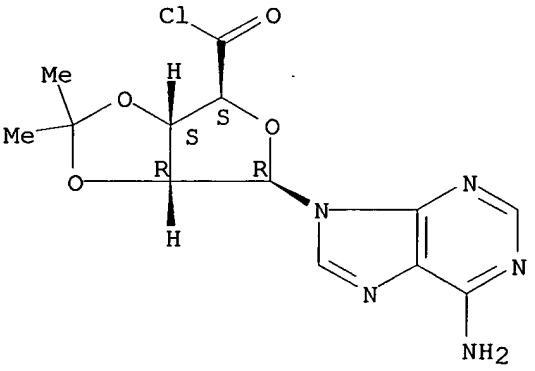
(prepn. and cleavage of)
RN 59882-05-2 HCAPLUS
CN .beta.-D-Ribofuranuronothioic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, S-ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



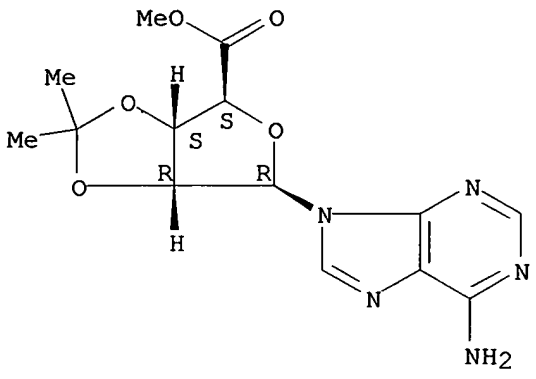

IT **39491-49-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with alcs.)
RN 39491-49-1 HCAPLUS
CN .beta.-D-Ribofuranuronoyl chloride, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



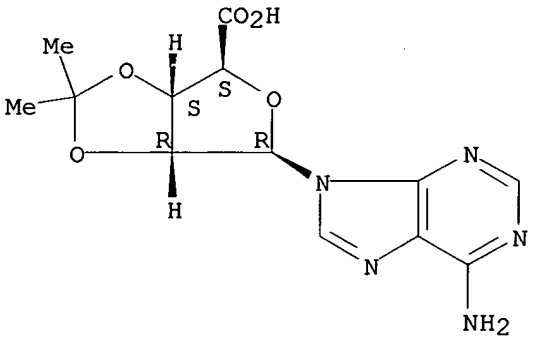

IT **23754-29-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and **vasodilating** activity of)
RN 23754-29-2 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **59882-06-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 59882-06-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, monosodium salt (9CI) (CA INDEX NAME)

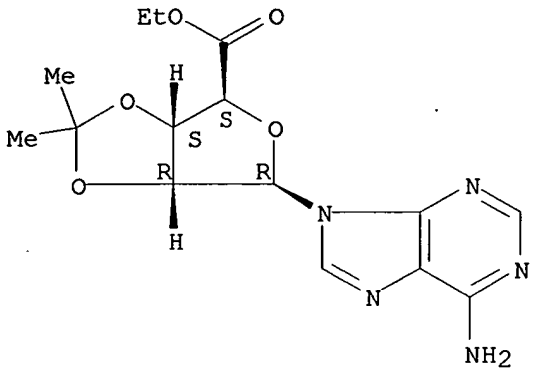
Absolute stereochemistry.



● Na

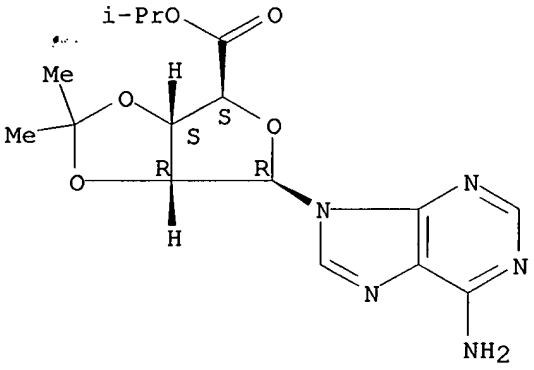
IT **35803-48-6P 35803-49-7P 41110-90-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **vasodilator**)
RN 35803-48-6 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



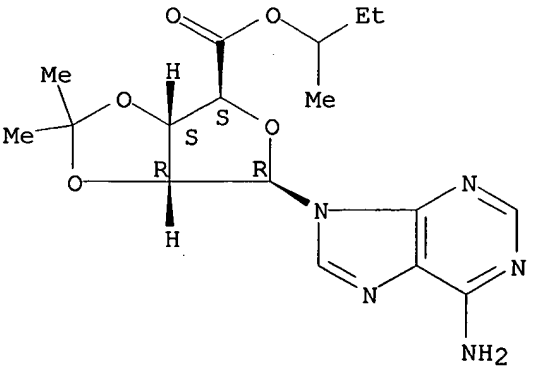
RN 35803-49-7 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2',3'-O-(1-methylethylidene)-, 1-methylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



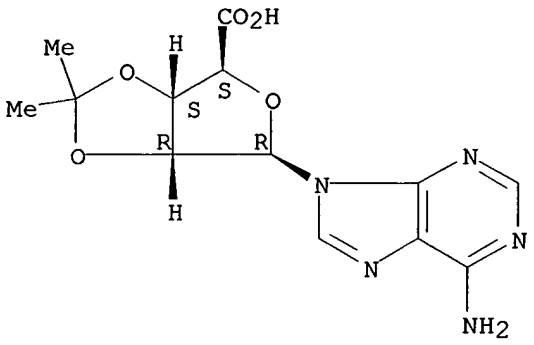
RN 41110-90-1 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, 1-methylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **59881-97-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkyl halide)
RN 59881-97-9 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, monothallium(1+) salt (9CI) (CA INDEX NAME)

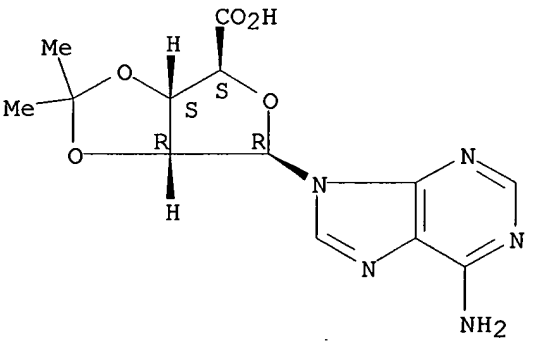
Absolute stereochemistry.




● Tl(I)

IT **19234-66-3**
RL: BIOL (Biological study)
**(vasodilator)**
RN 19234-66-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




L29 ANSWER 37 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1975:514827 HCAPLUS
DOCUMENT NUMBER: 83:114827
TITLE: 2-Alkoxyadenosines
INVENTOR(S): Honjo, Mikio; Marumoto, Ryuji; Yoshioka, Yoshio
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 50053393 | A2 | 19750512 | JP 1973-105286 | 19730918 |

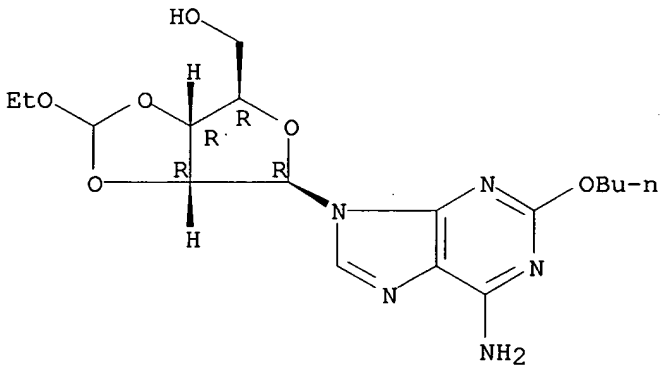
PRIORITY APPLN. INFO.: JP 1973-105286 19730918

AB 2-Haloadenosines, where the 2'- and 3'-OH groups are protected, are treated with an aliph. alc. and base to give 2',3'-protected 2-alkoxyadenosines. 2-Alkoxyadenosines are prepd. by hydrolysis. The protected products have coronary **vasodilatory**, hypotensive, and diuretic activities (no data). Thus, a mixt. of 6.6 g 2-chloroadenosine, 55 ml HC(OEt)3, 10 ml DMF, and 0.8 g p-toluenesulfonic acid was stirred at 30.degree. for 0.5 hr, poured into aq. NaHCO3, and extd. with CHCl3 to give 2',3'-O-ethoxymethylidene deriv. which was heated with 3 g NaOH in 62 ml BuOH at 90.degree. for 1 hr to give 2',3'-O-ethoxymethylidene-2-butoxyadenosine. Hydrolysis in 40% aq. AcOH at 35.degree. for 2 days gave 2-butoxyadenosine. Similarly prepd. was 2-pentyloxyadenosine.

IT **56720-42-4P 56720-43-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

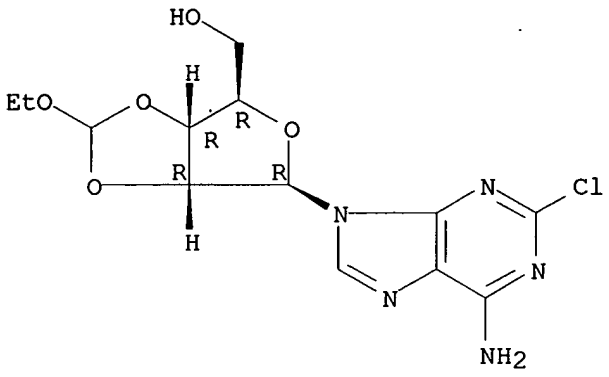
RN 56720-42-4 HCAPLUS
CN Adenosine, 2-butoxy-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



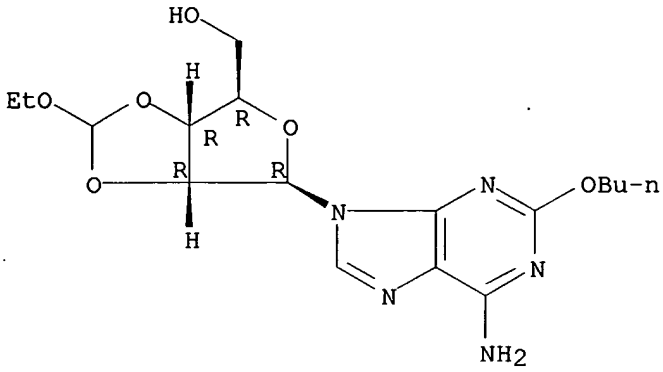
L29 ANSWER 38 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1975:479518 HCAPLUS
DOCUMENT NUMBER: 83:79518
TITLE: Synthesis and coronary **vasodilating** activity of 2-substituted adenosines
AUTHOR(S): Marumoto, Ryuji; Yoshioka, Yoshio; Miyashita, Osamu; Shima, Shunsuke; Imai, Kinichi; Kawazoe, Katsuyoshi; Honjo, Mikio
CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind., Osaka, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1975), 23(4), 759-74
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 2-Haloadenosines were prepd. by acetylation of 2-haloinosines followed by chlorination and amination. 2-Alkoxyadenosines were prepd. by protection of 2'- and 3'-OH groups of 2-chloroadenosine (I) or 2-chloroinosine, followed by substitution of the C atom with alkoxy group. The reaction of 5-amino-4-cyano-1-.beta.-D-ribofuranosylimidazole with CS2 afforded 2,6-di-mercapto-9-.beta.-D-ribofuranosylpurine, which was converted to 2-mercaptoadenosine and its S-substituted derivs. 2-Phenylaminoadenosine (II) was prepd. from 2-phenylamino-2',3',5'-tri-O-acetylinosine, which was prepd. by acetylation of 2-phenylaminoinosine with AcCl in HOAc. O-substituted 2-hydroxyadenosines, S-substituted 2-mercaptoadenosines, N2-substituted 2-aminoadenosines, 2-alkyl- and -aryl-adenosines were prepd. among which several compds. had coronary **vasodilating** potency. II showed not only a strong potency, but also a longer duration of the effect than that of I.

IT **56720-42-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deblocking of)

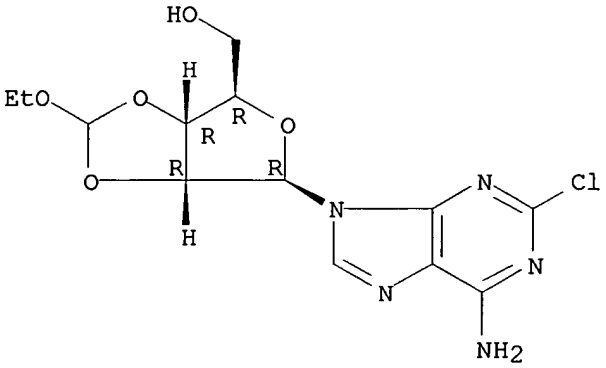
RN 56720-42-4 HCAPLUS
CN Adenosine, 2-butoxy-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **56720-43-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 39 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:10272 HCAPLUS
DOCUMENT NUMBER: 80:10272
TITLE: Ethyl adenosine-5'-carboxylate. Potent vasoactive agent in the dog
AUTHOR(S): Stein, Herman H.
CORPORATE SOURCE: Dep. Gen. Pharmacol., Abbott Lab., North Chicago, IL, USA
SOURCE: Journal of Medicinal Chemistry (1973), 16(11), 1306-8
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Et adenosine-5'-carboxylate (I) [35803-57-7] produced a marked, long-lasting increase in coronary sinus pO2 in dogs, indicating that I functioned as a coronary **vasodilator**. I was effective when given i.v. (.leq.0.10 mg/kg), intraduodenally, or orally (.geq.0.15 mg/kg). I was not a substrate or an inhibitor for an adenosine deaminase [9026-93-1] or adenylate deaminase [9025-10-9], and was apparently not

metab. by the organism. The instantaneous effect of I after i.v. administration suggested a direct action on cardivascular receptors. The toxicity of I was >1000 mg/kg orally and .sim.700 mg/kg i.v.

IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.